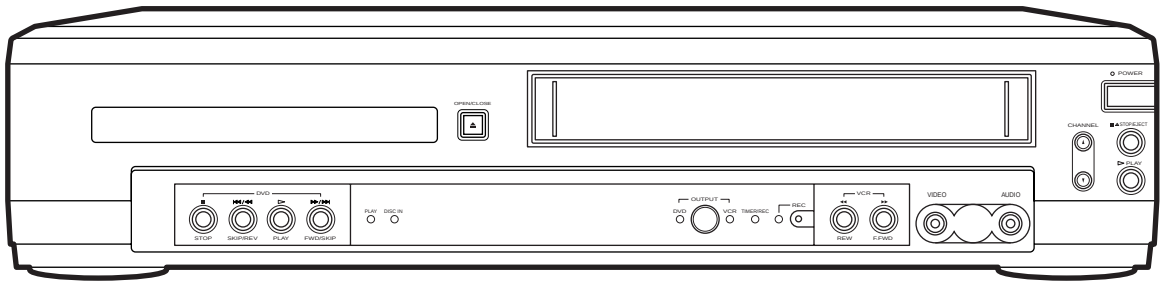
Symphonic

SERVICE MANUAL

This service manual supplement (WF803) contains only the difference from the original model.
For all other data, see the original service manual for EWD2203.

DVD PLAYER & VIDEO CASSETTE RECORDER

WF803



Different parts from original model (EWD2203)

Ref. No.	Description	Part No.
A1X	FRONT ASSEMBLY H9402UD	0VM204251
A2	TOP COVER(BLACK) H9450UD	0VM306098
A8	DOOR, CASSETTE H9402UD	0VM415465
A10⚠	LABEL, RATING H9402UD	----------
A10⚠	LABEL, RATING H9402UD	----------
A14	LABEL, BAR CODE H9402UD	----------
A18	LABEL, TELEPHONE NUMBER H5720UD	----------
A20	PANEL, TRAY H9402UD	0VM415475
2L041	SCREW, C-TIGHT M3X5 BIND HEAD +	GBKC3050
S1	GIFT BOX CARTON H9402UD	0VM306406
X1	REMOTE CONTROL UNIT 364/CRC007	NA220UD
X1	REMOTE CONTROL UNIT 364/CRC007	NA270UD
X20⚠	OWNER'S MANUAL H9402UD	0VMN03747
X36	RETURN STOP SHEET H9402UD	0VM415554

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SERVICE MANUAL

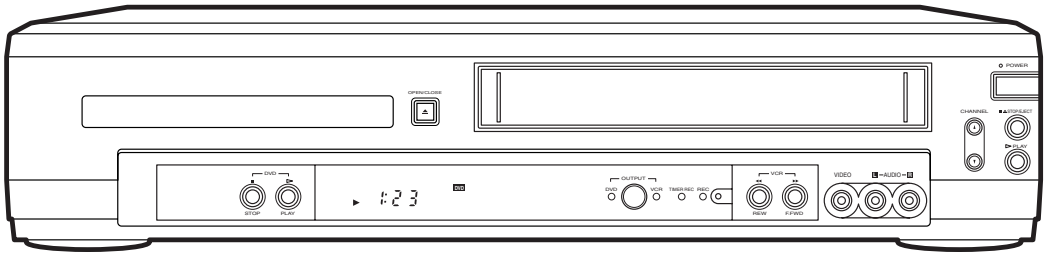
Sec. 1: Main Section
- Specifications
- Preparation for Servicing
- Adjustment Procedures
- Schematic Diagrams
- CBA's

Sec. 2: Deck Mechanism Section
- Standard Maintenance
- Alignment for Mechanism
- Disassembly/Assembly of Mechanism
- Alignment Procedures of Mechanism

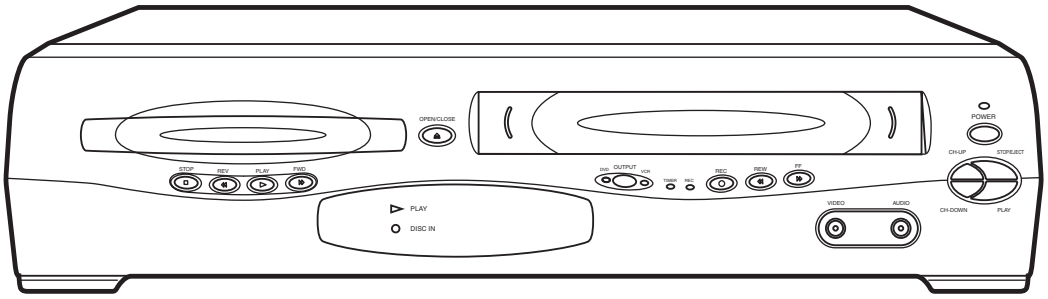
Sec. 3: Exploded views and Parts List Section
- Exploded views
- Parts List

DVD PLAYER & VIDEO CASSETTE RECORDER

DVC860D



EWD2203



VHS

IMPORTANT SAFETY NOTICE

Proper service and repair is important to the safe, reliable operation of all Funai Equipment. The service procedures recommended by Funai and described in this service manual are effective methods of performing service operations. Some of these service special tools should be used when and as recommended.

It is important to note that this service manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It also is important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Funai could not possibly know, evaluate and advice the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Funai has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by Funai must first use all precautions thoroughly so that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

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MAIN SECTION

DVD PLAYER & VIDEO CASSETTE RECORDER

DVC860D/EWD2203

Sec. 1: Main Section
- **Specifications**
- **Preparation for Servicing**
- **Adjustment Procedures**
- **Schematic Diagrams**
- **CBA's**

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SPECIFICATIONS

< VCR Section >

Description	Unit	Minimum	Nominal	Maximum	Remark
1. Video					
1-1. Video Output (PB)	Vp-p	0.8	1.0	1.2	SP Mode
1-2. Video Output (R/P)	Vp-p	0.8	1.0	1.2	
1-3. Video S/N Y (R/P)	dB	40	45		SP Mode, W/O Burst
1-4. Video Color S/N AM (R/P)	dB	37	41		SP Mode
1-5. Video Color S/N PM (R/P)	dB	30	36		SP Mode
1-6. Resolution (PB)	Line	230	245		SP Mode
2. Servo					
2-1. Jitter Low	μsec		0.07	0.12	SP Mode
2-2. Wow & Flutter	%		0.3	0.5	SP Mode
3. Normal Audio					
3-1. Output (PB)	dBV	-9	-6	-3	SP Mode
3-2. Output (R/P)	dBV	-9	-6	-1.5	SP Mode
3-3. S/N (R/P)	dB	36	41		SP Mode
3-4. Distortion (R/P)	%		1.0	4.0	SP Mode
3-5. Freq. resp (R/P) at 200Hz	dB	-11	-4		SP Mode
(-20dB ref. 1kHz) at 8kHz	dB	-14	-4		SP Mode
4. Tuner					
4-1. Video output	Vp-p	0.8	1.0	1.2	E-E Mode
4-2. Video S/N	dB	39	42		E-E Mode
4-3. Audio output	dB	-10	-6	-2	E-E Mode
4-4. Audio S/N	dB	40	46		E-E Mode
5. Hi-Fi Audio [DVC860D]					
5-1. Output	dBV	-12	-8	-4	SP Mode
5-2. Dynamic Range	dB	70	85		SP Mode
5-3. Freq. resp (6dB B.W)	Hz		20 ~ 20K		SP Mode

Note: Nominal specs represent the design specs. All units should be able to approximate these – some will exceed and some may drop slightly below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable; In no case should a unit fail to meet limit specs.

< DVD Section >

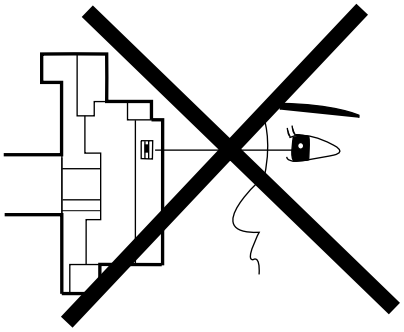
ITEM	CONDITIONS	UNIT	NOMINAL	LIMIT
1. Video Output	75 ohm load	Vpp	1.0	± 0.1
2. Coaxial Digital Out	75 ohm load	mVpp	500	± 100
3. Audio (PCM)				
3-1. Output Level	1kHz 0dB	Vrms	2.0	
3-2. S/N		dB	100	
3-3. Freq. Response				
DVD	fs=48kHz 20~22kHz	dB	± 0.5	
CD	fs=44.1kHz 20~20 kHz	dB	± 0.5	
3-4. THD+N				
DVD	1 kHz 0dB	%	0.05	
CD	1 kHz 0dB	%	0.003	

NOTES:

1. All Items are measured without pre-emphasis unless otherwise specified.
2. Power supply : AC120 V 60 Hz
3. Load imp. : 100 K ohm
4. Room ambient : +25 °C

LASER BEAM SAFETY PRECAUTIONS

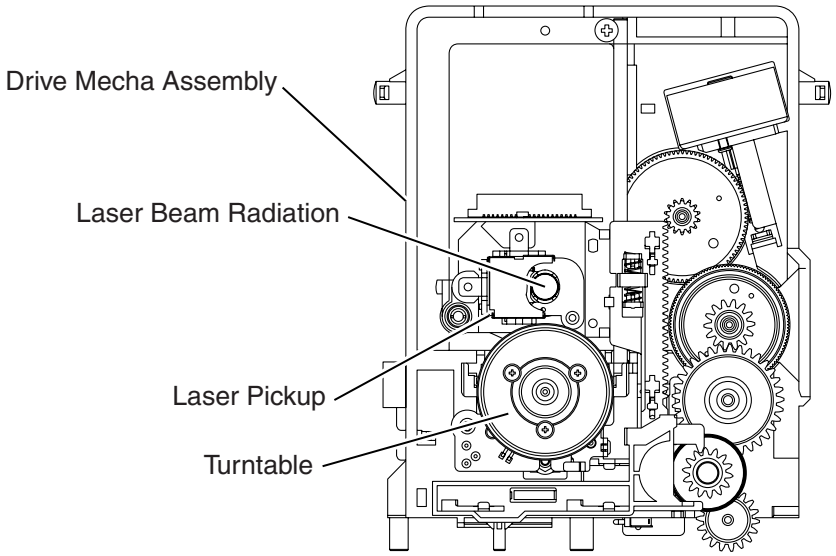
This DVD player uses a pickup that emits a laser beam.



Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.

The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 30cm away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.

Caution: Use of controls and adjustments, or doing procedures other than those specified herein, may result in hazardous radiation exposure.



CAUTION
LASER RADIATION
WHEN OPEN. DO NOT
STARE INTO BEAM.

Location: Inside Top of DVD mechanism.

IMPORTANT SAFETY PRECAUTIONS

Product Safety Notice

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a ⚠ on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are carefully inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced**.**

Precautions during Servicing

A. Parts identified by the ⚠ symbol are critical for safety. Replace only with part number specified.

B. In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.
Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.

C. Use specified internal wiring. Note especially:

1)Wires covered with PVC tubing

2)Double insulated wires

3)High voltage leads

D. Use specified insulating materials for hazardous live parts. Note especially:

1)Insulation tape

2)PVC tubing

3)Spacers

4)Insulators for transistors

E. When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.

F. Observe that the wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).

G. Check that replaced wires do not contact sharp edges or pointed parts.

H. When a power cord has been replaced, check that 5 - 6 kg of force in any direction will not loosen it.

I. Also check areas surrounding repaired locations.

J. Be careful that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

K. Crimp type wire connector
The power transformer uses crimp type connectors which connect the power cord and the primary side of the transformer. When replacing the transformer, follow these steps carefully and precisely to prevent shock hazards.
Replacement procedure

1)Remove the old connector by cutting the wires at a point close to the connector.

Important: Do not re-use a connector. (Discard it.)

2)Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

3)Align the lengths of the wires to be connected. Insert the wires fully into the connector.

4)Use a crimping tool to crimp the metal sleeve at its center. Be sure to crimp fully to the complete closure of the tool.

L. When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC outlet.

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts, and wires have been returned to their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

Table 1 : Ratings for selected area

AC Line Voltage	Clearance Distance (d) (d')
120 V	≥ 3.2mm (0.126 inches)

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

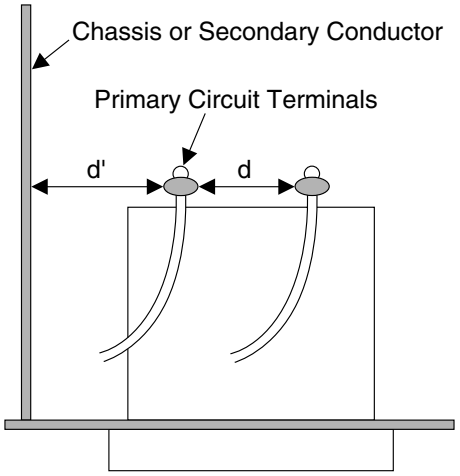


Fig. 1

2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

Measuring Method (Power ON) :

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z. See Fig. 2 and the following table.

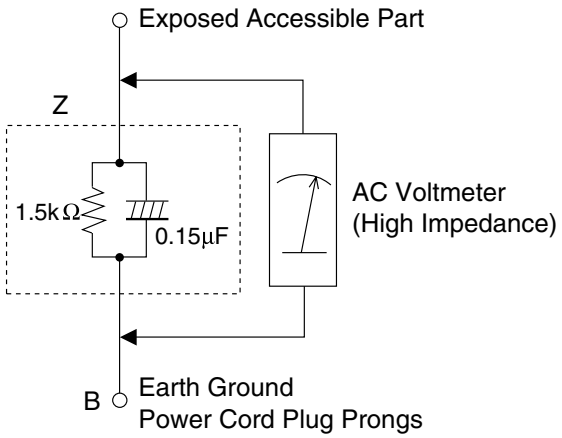


Fig. 2

Table 2: Leakage current ratings for selected areas

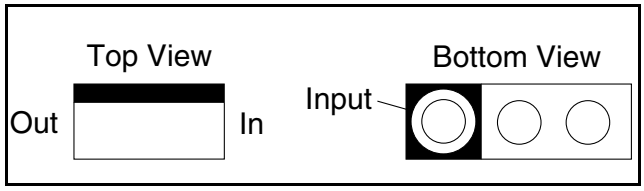
AC Line Voltage	Load Z	Leakage Current (i)	Earth Ground (B) to:
120 V	0.15μF CAP. & 1.5kΩ RES. Connected in parallel	i≤0.5mA Peak	Exposed accessible parts

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

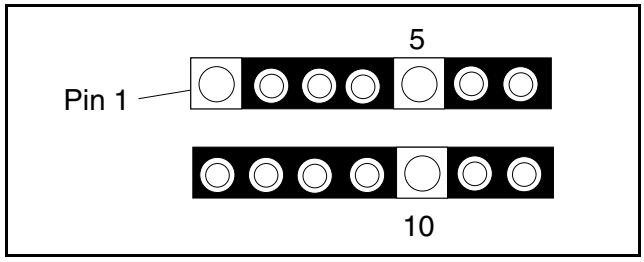
STANDARD NOTES FOR SERVICING

Circuit Board Indications

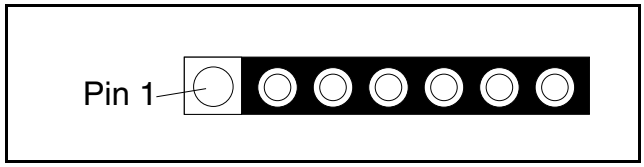
a. The output pin of the 3 pin Regulator ICs is indicated as shown.



b. For other ICs, pin 1 and every fifth pin are indicated as shown.

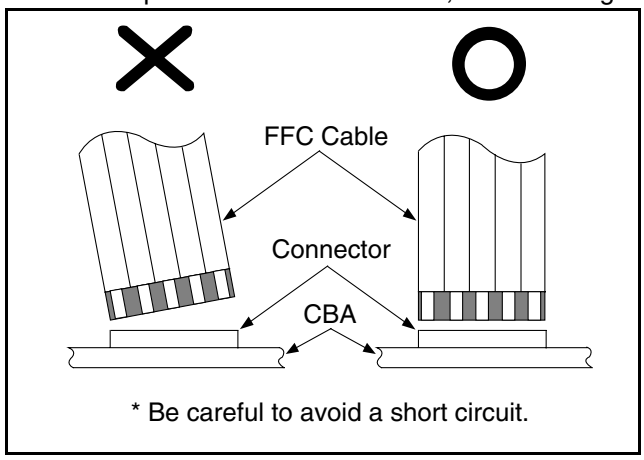


c. The 1st pin of every male connector is indicated as shown.



Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.



How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:.

(1) Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

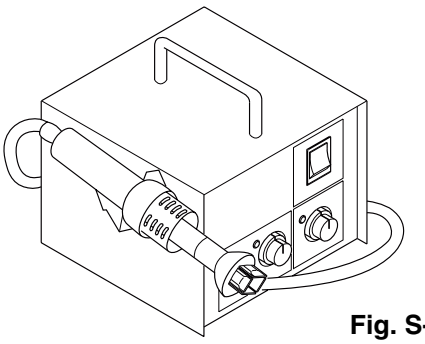


Fig. S-1-1

(2) Remove the flat pack-IC with tweezers while applying the hot air.

(3) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)

(1) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

Caution:

1. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)
2. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

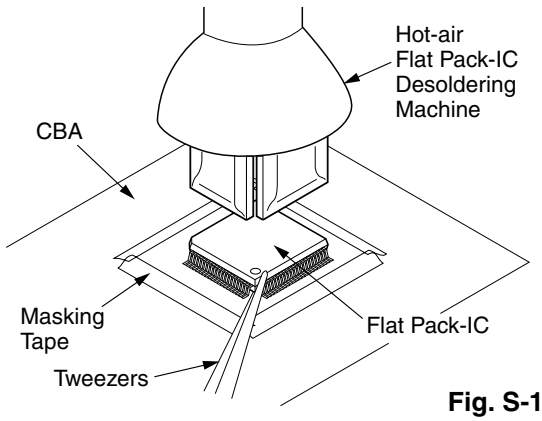


Fig. S-1-2

With Soldering Iron:

(1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

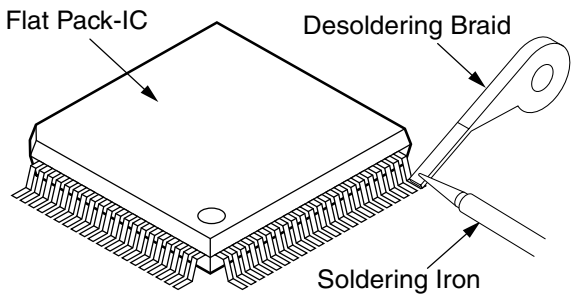


Fig. S-1-3

(2) Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)

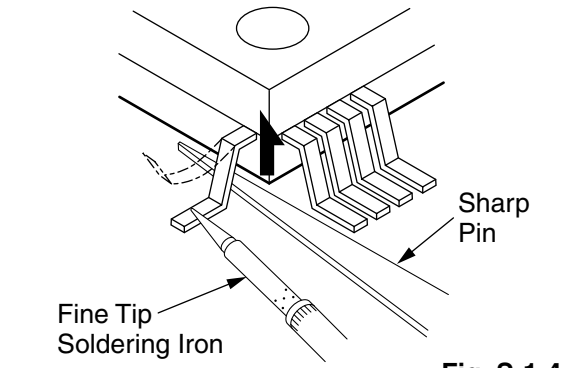


Fig. S-1-4

(3) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)

(4) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

With Iron Wire:

(1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

(2) Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.

(3) While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5

(4) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)

(5) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

Note:

When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.

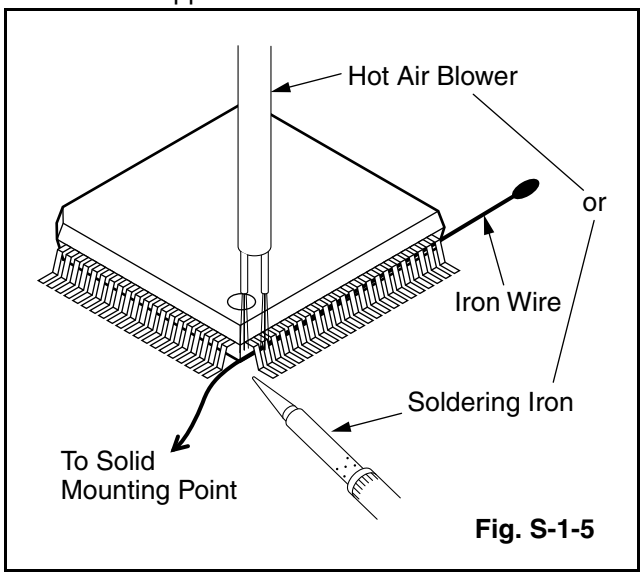


Fig. S-1-5

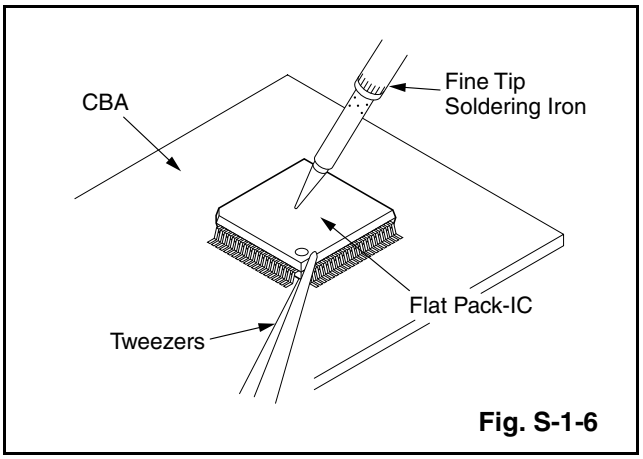


Fig. S-1-6

2. Installation

(1) Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.

(2) The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)

(3) Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.

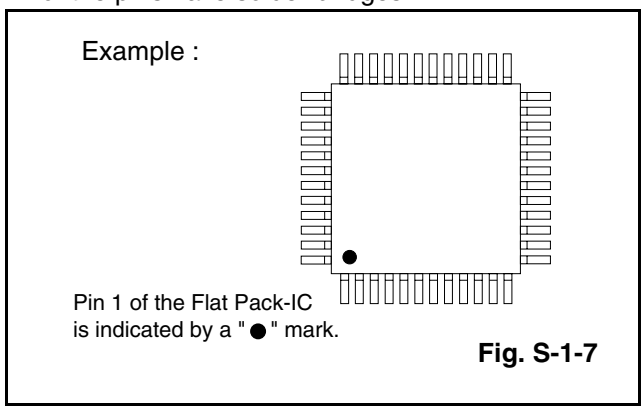


Fig. S-1-7

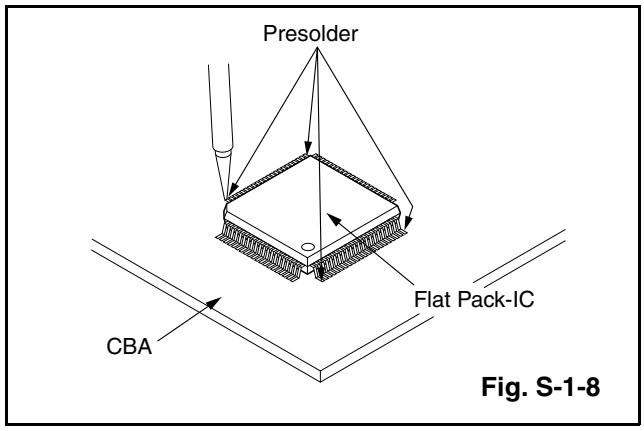


Fig. S-1-8

Instructions for Handling Semi-conductors

Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

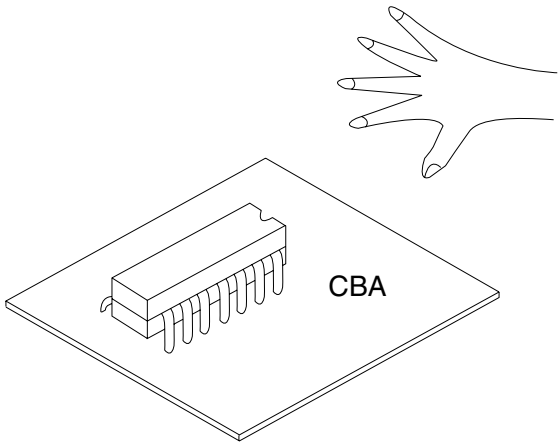
1. Ground for Human Body

Be sure to wear a grounding band (1MΩ) that is properly grounded to remove any static electricity that may be charged on the body.

2. Ground for Workbench

(4) Be sure to place a conductive sheet or copper plate with proper grounding (1MΩ) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing.

< Incorrect >



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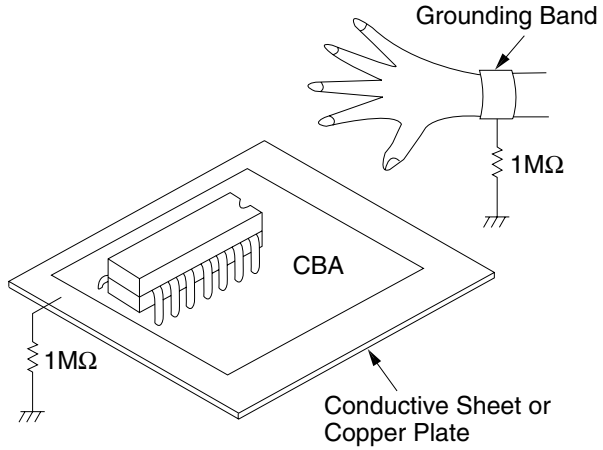


PREPARATION FOR SERVICING

How to Enter the Service Mode

About Optical Sensors

Caution:

An optical sensor system is used for the Tape Start and End Sensors on this equipment. Carefully read and follow the instructions below. Otherwise the unit may operate erratically.

What to do for preparation

Insert a tape into the Deck Mechanism Assembly and press the PLAY button. The tape will be loaded into the Deck Mechanism Assembly. Make sure the power is on, TP502 (SENSOR INHIBITION) to GND. This will stop the function of Tape Start Sensor, Tape End Sensor and Reel Sensors. (If these TPs are connected before plugging in the unit, the function of the sensors will stay valid.) See Fig. 1.

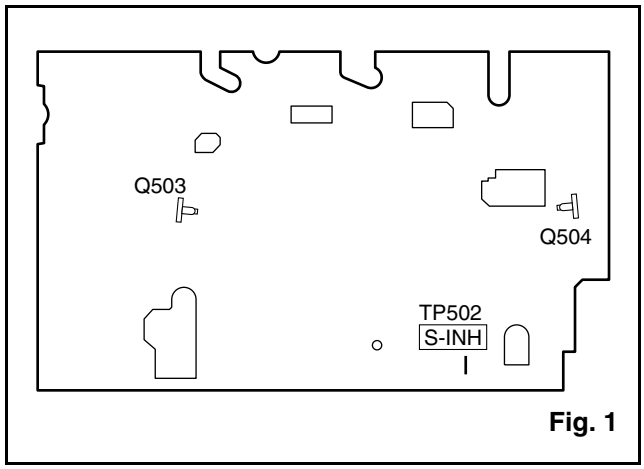


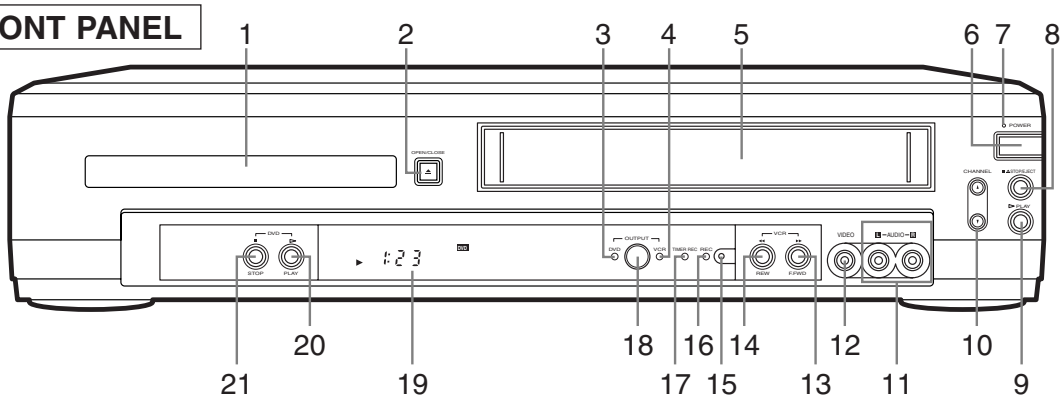
Fig. 1

Note: Because the Tape End Sensors are inactive, do not run a tape all the way to the start or the end of the tape to avoid tape damage.

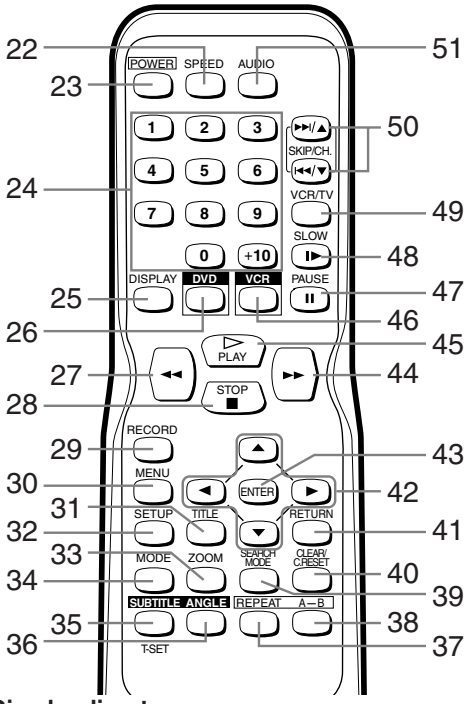
OPERATING CONTROLS AND FUNCTIONS

[DVC860D]

FRONT PANEL



REMOTE CONTROL



1. **Disc loading tray**
2. **OPEN/CLOSE Button**
   Press to insert discs into or remove them from the tray.
3. **DVD OUTPUT Light (Green)**
   This light appears when the DVD output mode is selected. You can only watch DVDs when the green DVD OUTPUT light is on. To make the green DVD OUTPUT light come on, press DVD on the remote control or OUTPUT on the front panel.
4. **VCR OUTPUT Light (Green)**
   This light appears when the VCR output mode is selected. You can only watch tapes when the green VCR OUTPUT light is on. To make the green VCR OUTPUT light come on, VCR on the remote control or OUTPUT on the front panel.
5. **CASSETTE COMPARTMENT**
6. **POWER Button**
   Press to turn the power on and off.
7. **POWER Light**
   Lights up when the power is on.
8. **STOP/EJECT Button (VCR)**
   EJECT Button
   Press to remove the tape from the VCR.
   STOP Button
   Press to stop the tape motion.
9. **PLAY Button(VCR)**
   Press to begin playback.
10. **CHANNEL Buttons**
    In VCR mode, press to change TV channels on the VCR; press to adjust the tracking during normal or slow motion playback; press to remove vertical jitter in a Still picture.
11. **AUDIO In Jacks**
    Connect audio cables coming from the audio out jacks of a camcorder, another VCR, or an audio source here.
12. **VIDEO In Jack**
    Connect a video cable coming from the video out jack of a camcorder, another VCR, or a video source (laser disc player, camcorder, etc.) here.
13. **F.FWD Button (VCR)**
    Press to rapidly advance the tape, or view the picture rapidly in forward during playback. (Forward Search).
14. **REW Button (VCR)**
    Press to rewind the tape, or to view the picture rapidly in reverse during the playback mode (Rewind Search).
15. **REC/OTR Button**
    Press once to start a recording. Press repeatedly to start a One-Touch Recording.
16. **REC Light**
    Lights up during recording.
17. **TIMER REC Light**
    This light glows when the DVD/VCR is in standby mode for a timer recording or during a One-Touch Recording. It flashes if T-SET is pressed for a timer recording, but there is no tape in the DVD/VCR. It flashes when all timer recordings or One-Touch Recordings are finished.

18. **OUTPUT Button**
Press to select DVD mode or VCR mode.
- You can switch the output mode either by pressing OUTPUT on the front panel, or by pressing DVD or VCR on the remote control. However, **if you press OUTPUT on the front panel first, you need to re-select the corresponding mode by pressing DVD or VCR on the remote control.**

19. **Display, Remote Sensor Window**
20. **PLAY Button (DVD)**
Press to begin playback.
21. **STOP Button (DVD)**
Stops operation of the disc.
22. **SPEED Button**
Press to select the VCR's recording speed (SP or SLP)
23. **POWER Button**
Press to turn the power on and off.
24. **Number Buttons**
- **DVD mode**
Press to directly select a Track (Audio CD) for playback.
Press to program Tracks (Audio CD) for playback.
+10
Use this button to enter number 10 and above.
- **VCR mode**
Press to select TV channels on the VCR.
To select channels, enter channel numbers as a two-digit number for the quickest results. For example, to select channel 6, press 0 then 6.

25. **DISPLAY Button**
- **DVD mode**

Press to access or remove the display screen during DVD or Audio CD playback.
- **VCR mode**
Press to access or remove the VCR's on-screen status display.

26. **DVD Button**
Press to select DVD mode for the remote control.
- You can switch the OUTPUT mode either by pressing OUTPUT on the front panel, or by pressing DVD or VCR on the remote control. However, **if you press OUTPUT on the front panel first, you need to re-select the corresponding mode by pressing DVD or VCR on the remote control.**

27. **◄◄ Button**
- **DVD mode**
Press to view the DVD picture in fast reverse motion. Press PAUSE, then press this button to begin slow motion playback. Press this button repeatedly to change the reverse speed of slow motion.
- **VCR mode**
Press to rewind the tape, or to view the picture rapidly in reverse during the playback mode (Rewind Search).

28. **STOP Button**
- **DVD mode**
Press to stop the disc motion.
- **VCR mode**
Press to stop the tape motion.

29. **RECORD Button**
Press once to start a recording.
30. **MENU Button**
- **DVD mode**
Press to display the menu of the Disc.
- **VCR mode**
Press to access the VCR menu.

31. **TITLE Button**
32. **SETUP Button**
Press to enter DVD player setup mode.
33. **ZOOM Button**
Enlarges part of a DVD-reproduced image.
34. **MODE Button**
Activates program playback or random playback mode when playing CDs or MP3. Sets Black level and virtual surround.
35. **SUBTITLE Button**
Press to select the desired subtitle language.
T-SET Button
Press to put the VCR into standby mode for a timer recording.
36. **ANGLE Button**
Press to change the camera angle to see the sequence being played back from a different angle.
37. **REPEAT Button**
Repeats playback of the current disc, title, chapter or track.
38. **A-B REPEAT Button**
Repeats playback of a selected section.
39. **SEARCH MODE Button**
- **DVD mode**
Press to access or remove the Search display, which allows you to go directly to a specific Title/Chapter/Track/Time.
- **VCR mode**
Press to perform a Time Search or an Index Search.

40. **CLEAR/C.RESET Button**
- **DVD mode**
Press to reset the setting.
- **VCR mode**
Press to reset the counter. Press to exit from the MENU screen.

41. **RETURN Button**
- **DVD mode**

Returns to the previous operation.
42. **Arrow Buttons**
Use when making settings while watching the display on a TV screen.
- **VCR mode**

▼/▲Buttons
Press to enter digits when setting program (For example: setting clock or timer program). Press to select the setting modes from the on screen menu.
►Button
When setting program (For example: setting clock or timer program), press to determine your selection and proceed to the next step you want to input. Press to determine the setting modes from the on screen menu. Press to add or delete channel numbers during channel preset.
◄Button
Press to cancel a setting of timer program. Press to correct digits when setting program (For example: setting clock or timer program). Press to add or delete channel numbers during channel preset.

43. **ENTER Button**
- **DVD mode**
Press to accept a setting.

44. ►► Button

● **DVD mode**

Press to fast forward the Disc. Press PAUSE, then press this button to begin slow motion playback. Press this button repeatedly to change the forward speed of slow motion.

● **VCR mode**

Press to rapidly advance the tape, or view the picture rapidly in forward during playback (Forward Search).

45. PLAY Button

● **DVD mode**

Press to begin playback.

● **VCR mode**

Press to begin playback.

46. VCR Button

Press to select VCR mode for the remote control.

● You can switch the OUTPUT mode either by pressing OUTPUT on the front panel, or by pressing DVD or VCR on the remote control. However, **if you press OUTPUT on the front panel first, you need to re-select the corresponding mode by pressing DVD or VCR on the remote control.**

47. PAUSE Button

● **DVD mode**

Press to pause Disc playback. Press repeatedly to advance the DVD picture step by step (or one frame at a time).

● **VCR mode**

While recording, press to temporarily stop the recording (pause). Press a second time to resume normal recording. You can not pause a One-Touch Recording. Or, press during tape playback to freeze the picture. Press to advance the picture one frame at a time during still mode.

48. SLOW Button

During tape playback, press to view the video tape in slow motion. Press again to resume normal playback. This button does not affect DVD playback.

49. VCR/TV Button

Use to select VCR or TV position.

● **VCR Position**

To view playback, to monitor video recordings or to watch TV using the VCR tuner.

● **TV Position**

To watch TV or to view one program while recording another.

50. SKIP/CH. Buttons

● **DVD mode**

Press to skip Chapters or Tracks.

● **VCR mode**

Press to change TV channels on the VCR.

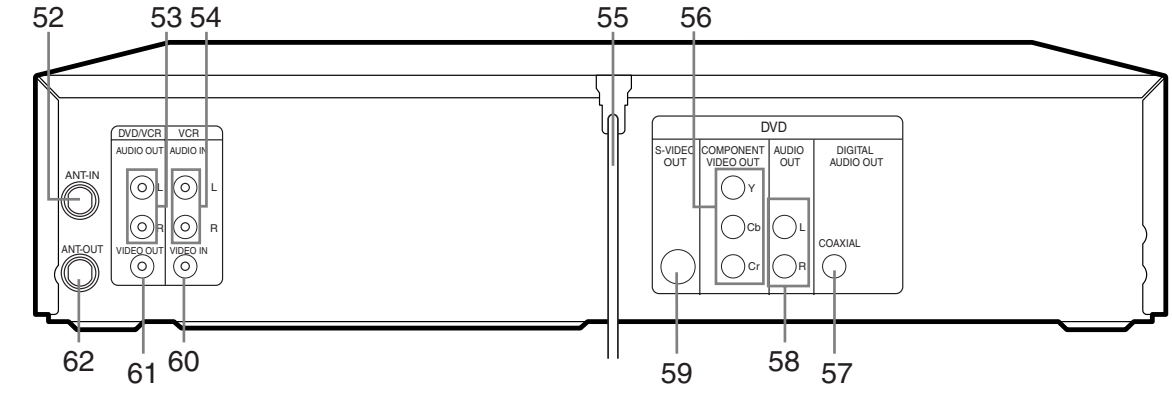
51. AUDIO Button

Press to select a desired audio language or sound mode.

Notes

- To use the remote control to operate the DVD/VCR COMBINATION UNITS and its features, press DVD on the remote control before pressing other DVD's operation buttons. Verify that the green DVD OUTPUT Light is on.
- To use the remote control to operate the VCR and its features, press VCR on the remote control before pressing other VCR's operation buttons. Verify that the green VCR OUTPUT Light is on.

REAR VIEW



52. ANT-IN (Antenna In) Jack

Connect your antenna, Cable Box, or Direct Broadcast System.

53. DVD/VCR AUDIO OUT Jacks

Connect the supplied audio cables here and to the Audio In jacks of a television or other audio equipment.

54. AUDIO IN Jacks

Connect audio cables coming from the audio out jacks of a camcorder, another VCR, or an audio source here.

55. AC Power Cord

Connect to a standard AC outlet to supply power to the DVD/VCR COMBINATION UNITS.

56. COMPONENT VIDEO OUT Jacks

Connect optional component video cables here and to the component Video In jacks of a television.

57. COAXIAL Jack

Connect an optional coaxial digital audio cable here and to the Coaxial Digital Audio In jack of a decoder or audio receiver.

58. DVD AUDIO OUT Jacks
Connect the supplied audio cables here and to the Audio In jacks of a television or other audio equipment (DVD only).

59. S-VIDEO OUT Jack
Connect an optional S-Video cable here and to the S-Video In jack of a television.

60. VIDEO IN Jack
Connect a cable coming from the video out jack of a camcorder, another VCR, or an audio-visual source (laser disc player, video disc player, etc.) here.

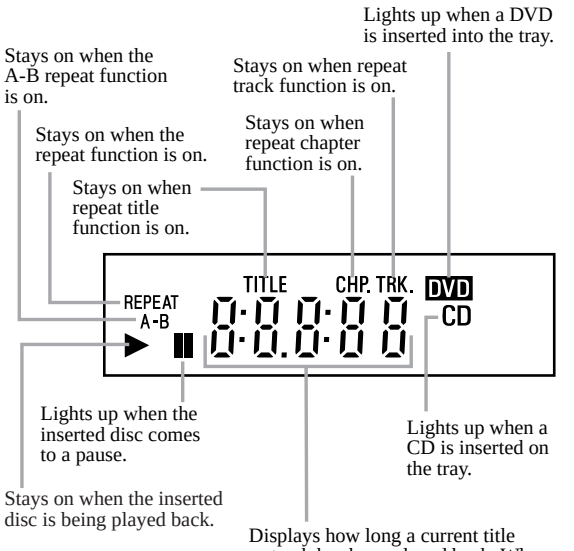
61. DVD/VCR VIDEO OUT Jack
Connect the yellow video cable (supplied) here and to the TV's Video In jack.

62. ANT-OUT (Antenna Out) Jack
Use the supplied RF coaxial cable to connect this jack to the ANTENNA IN Jack on your TV.

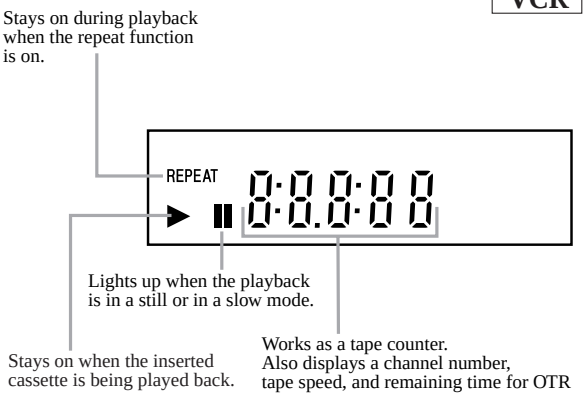
Caution: Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the player.

DISPLAY

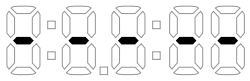
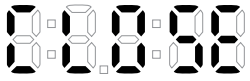
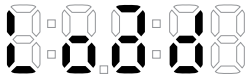
DVD


Lights up when a DVD is inserted into the tray.
Stays on when the A-B repeat function is on.
Stays on when repeat track function is on.
Stays on when the repeat function is on.
Stays on when repeat chapter function is on.
Stays on when repeat title function is on.
TITLE
CHP. TRK.
DVD
CD
REPEAT
A-B
Lights up when the inserted disc comes to a pause.
Lights up when a CD is inserted on the tray.
Stays on when the inserted disc is being played back.
Displays how long a current title or track has been played back. When a chapter or track has switched, the number of the a title, chapter or track is displayed.

VCR


Stays on during playback when the repeat function is on.
REPEAT
Lights up when the playback is in a still or in a slow mode.
Stays on when the inserted cassette is being played back.
Works as a tape counter. Also displays a channel number, tape speed, and remaining time for OTR

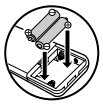
DISPLAYS DURING OPERATION

	No disc inserted or playing DVD menu
	Tray open
	Tray closed
	Loading the Disc

LOADING THE BATTERIES

1. Open the battery compartment cover.

2. Insert two AA batteries, with each one oriented correctly.

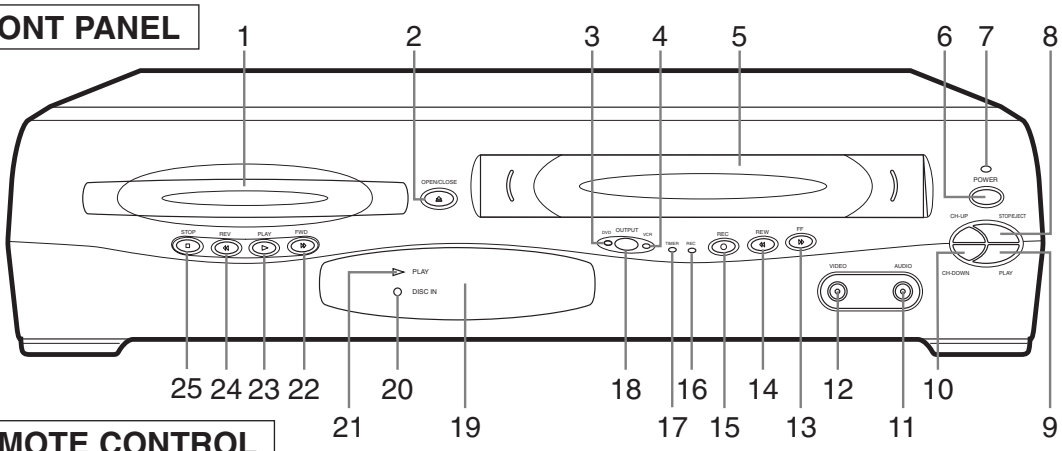


3. Close the cover.

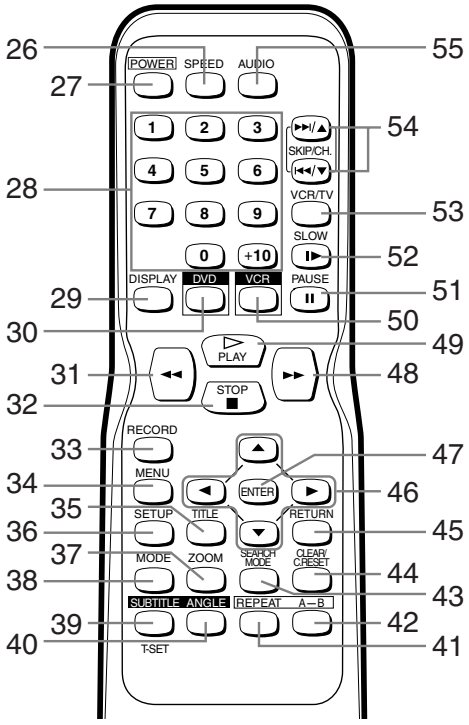
Notes
- Do not mix alkaline and manganese batteries.
- Do not mix old and new batteries.

[EWD2203]

FRONT PANEL



REMOTE CONTROL



1. **Disc loading tray**
2. **OPEN/CLOSE Button**
   Press to insert discs into or remove them from the tray.
3. **DVD OUTPUT Light (Green)**
   This light appears when the DVD output mode is selected. You can only watch DVDs when the green DVD OUTPUT light is on. To make the green DVD OUTPUT light come on, press DVD on the remote control or OUTPUT on the front panel.
4. **VCR OUTPUT Light (Green)**
   This light appears when the VCR output mode is selected. You can only watch tapes when the green VCR OUTPUT light is on. To make the green VCR OUTPUT light come on, VCR on the remote control or OUTPUT on the front panel.
5. **CASSETTE COMPARTMENT**
6. **POWER Button**
   Press to turn the power on and off.
7. **POWER Light (red)**
   Lights up when the power is on.
8. **STOP/EJECT Button (VCR)**
   EJECT Button
   Press to remove the tape from the VCR.
   STOP Button
   Press to stop the tape motion.
9. **PLAY Button(VCR)**
   Press to begin playback.
10. **CHANNEL Buttons**
    In VCR mode, press to change TV channels on the VCR; press to adjust the tracking during normal or slow motion playback; press to remove vertical jitter in a Still picture.
11. **AUDIO In Jacks**
    Connect audio cables coming from the audio out jacks of a camcorder, another VCR, or an audio source here.
12. **VIDEO In Jack**
    Connect a video cable coming from the video out jack of a camcorder, another VCR, or a video source (laser disc player, camcorder, etc.) here.
13. **F.FWD Button (VCR)**
    Press to rapidly advance the tape, or view the picture rapidly in forward during playback. (Forward Search).
14. **REW Button (VCR)**
    Press to rewind the tape, or to view the picture rapidly in reverse during the playback mode (Rewind Search).
15. **REC Button**
    Press once to start a recording. Press repeatedly to start a One-Touch Recording.
16. **REC Light**
    Lights up during recording.
17. **TIMER Light**
    This light glows when the DVD/VCR is in standby mode or off for a timer recording or during a One-Touch Recording. It flashes if T-SET is pressed for a timer recording, but there is no tape in the DVD/VCR. It flashes when all timer recordings or One-Touch Recordings are finished.

18. OUTPUT Button
Press to select DVD mode or VCR mode.
- You can switch the output mode either by pressing OUTPUT on the front panel, or by pressing DVD or VCR on the remote control. However, **if you press OUTPUT on the front panel first, you need to re-select the corresponding mode by pressing DVD or VCR on the remote control.**

19. Display, Remote Sensor Window

20. DISC IN Light (green)
Lights up when a disc is in the DVD Player.

21. PLAY Light (green)
Lights up during Disc playback.

22. FWD Button (DVD)
Press to fast forward the Disc. Press PAUSE, then press this button to begin slow motion playback. Press this button repeatedly to change the forward speed of slow motion.
Press to skip Chapters or Tracks.

23. PLAY Button (DVD)
Press to begin playback.

24. REV Button (DVD)
Press to view the DVD picture in fast reverse motion or to reverse playback of an Audio CD.
Press to skip Chapters or Tracks.

25. STOP Button (DVD)
Stops operation of the disc.

26. SPEED Button
Press to select the VCR's recording speed (SP or SLP)

27. POWER Button
Press to turn the power on and off.

28. Number Buttons
- **DVD mode**
  Press to directly select a Track (Audio CD) for playback.
  Press to program Tracks (Audio CD) for playback.
- **VCR mode**
  Press to select TV channels on the VCR.
  To select channels, enter channel numbers as a two-digit number for the quickest results. For example, to select channel 6, press 0 then 6.

29. DISPLAY Button
- **DVD mode**

Press to access or remove the display screen during DVD or Audio CD playback.
- **VCR mode**
  Press to access or remove the VCR's on-screen status display.

30. DVD Button
Press to select DVD mode for the remote control.
- You can switch the OUTPUT mode either by pressing OUTPUT on the front panel, or by pressing DVD or VCR on the remote control. However, **if you press OUTPUT on the front panel first, you need to re-select the corresponding mode by pressing DVD or VCR on the remote control.**

31. ◄◄ Button
- **DVD mode**
  Press to view the DVD picture in fast reverse motion or to reverse playback of an Audio CD.
- **VCR mode**
  Press to rewind the tape, or to view the picture rapidly in reverse during the playback mode (Rewind Search).

32. STOP Button
- **DVD mode**
  Press to stop the disc motion.
- **VCR mode**
  Press to stop the tape motion.

33. RECORD Button
Press once to start a recording.

34. MENU Button
- **DVD mode**
  Press to display the menu of the Disc.
- **VCR mode**
  Press to access the VCR menu.

35. TITLE Button

36. SETUP Button
Press to enter the setup mode.

37. ZOOM Button
Enlarges part of a DVD-reproduced image.

38. MODE Button
Activates program playback or random playback mode when playing CDs or MP3. Sets Black level and virtual surround.

39. SUBTITLE Button
Press to select the desired subtitle language.

T-SET Button
Press to put the VCR into stanby mode for a timer recording.

40. ANGLE Button
Press to change the camera angle to see the sequence being played back from a different angle.

41. REPEAT Button
Repeats playback of the current disc, title, chapter or track.

42. A-B REPEAT Button
Repeats playback of a selected section.

43. SEARCH MODE Button
- **DVD mode**
  Press to access or remove the Search display, which allows you to go directly to a specific Title/Chapter/Track/Time.
- **VCR mode**
  Press to perform a Time Search or an Index Search.

44. CLEAR/C.RESET Button
- **DVD mode**
  Press to reset the setting.
- **VCR mode**
  Press to reset the counter. Press to exit from the MENU screen.

45. RETURN Button
Returns to the previous operation.

46. Arrow Buttons
Use when making settings while watching the display on a TV screen.
- **VCR mode**

▼/▲Buttons
Press to enter digits when setting program (For example: setting clock or timer program). Press to select the setting modes from the on screen menu.

►Button
When setting program (For example: setting clock or timer program), press to determine your selection and proceed to the next step you want to input. Press to determine the setting modes from the on screen menu. Press to add or delete channel numbers during channel preset.

◄Button

Press to cancel a setting of timer program. Press to correct digits when setting program (For example: setting clock or timer program). Press to add or delete channel numbers during channel preset.

47. ENTER Button

Press to accept a setting.

48. ►► Button

● DVD mode

Press to fast forward the Disc. Press PAUSE, then press this button to begin slow motion playback. Press this button repeatedly to change the forward speed of slow motion.

● VCR mode

Press to rapidly advance the tape, or view the picture rapidly in forward during playback (Forward Search).

49. PLAY Button

● DVD mode

Press to begin playback.

● VCR mode

Press to begin playback.

50. VCR Button

Press to select VCR mode for the remote control.

● You can switch the OUTPUT mode either by pressing OUTPUT on the front panel, or by pressing DVD or VCR on the remote control. However, **if you press OUTPUT on the front panel first, you need to re-select the corresponding mode by pressing DVD or VCR on the remote control.**

51. PAUSE Button

● DVD mode

Press to pause Disc playback. Press repeatedly to advance the DVD picture step by step (or one frame at a time).

● VCR mode

While recording, press to temporarily stop the recording (pause). Press a second time to resume normal recording. You can not pause a One-Touch Recording. Or, press during tape playback to freeze the picture. Press to advance the picture one frame at a time during still mode.

52. SLOW Button

During tape playback, press to view the video tape in slow motion. Press again to resume normal playback. This button does not affect DVD playback.

53. VCR/TV Button

Use to select VCR or TV position.

● VCR Position

To view playback, to monitor video recording or to watch TV using the VCR tuner.

● TV Position

To watch TV or to view one program while recording another.

54. SKIP/CH. Buttons

● DVD mode

Press to skip Chapters or Tracks.

● VCR mode

Press to change TV channels on the VCR.

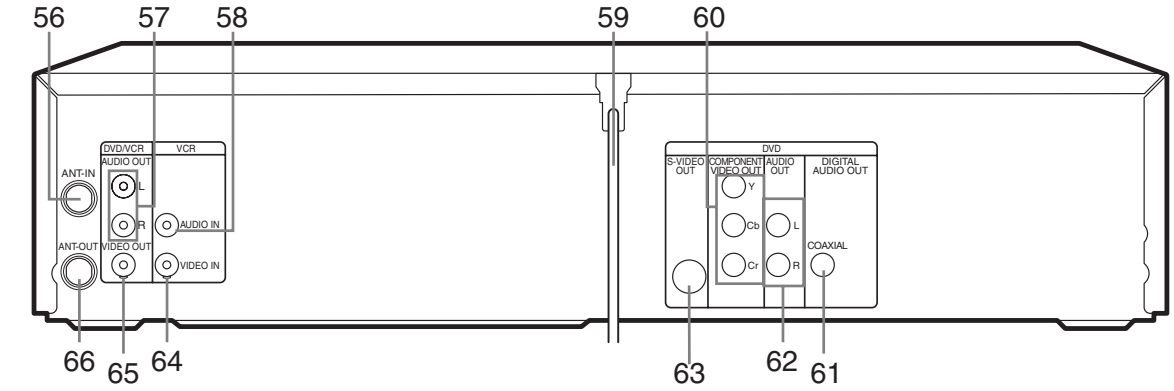
55. AUDIO Button

Press to select a desired audio language or sound mode.

Notes

- To use the remote control to operate the DVD/VCR COMBINATION UNITS and its features, press DVD on the remote control before pressing other DVD operation button. Verify that the green DVD OUTPUT Light is on.
- To use the remote control to operate the VCR and its features, press VCR on the remote control before pressing other VCR operation button. Verify that the green VCR OUTPUT Light is on.

REAR VIEW



56. ANT-IN (Antenna In) Jack

Connect your antenna, Cable Box, or Direct Broadcast System.

57. DVD/VCR AUDIO OUT Jacks

Connect the supplied audio cables here and to the Audio In jacks of a television or other audio equipment.

58. AUDIO IN Jack

Connect audio cable coming from the audio out jack of a camcorder, another VCR, or an audio source here.

59. AC Power Cord

Connect to a standard AC outlet to supply power to the DVD/VCR COMBINATION UNITS.

60. COMPONENT VIDEO OUT Jacks

Connect optional component video cables here and to the component Video In jacks of a television.

61. COAXIAL Jack

Connect an optional coaxial digital audio cable here and to the Coaxial Digital Audio In jack of a decoder or audio receiver.

62. DVD AUDIO OUT Jacks
Connect the supplied audio cables here and to the Audio In jacks of a television or other audio equipment (DVD only).

63. S-VIDEO OUT Jack
Connect an optional S-Video cable here and to the S-Video In jack of a television.

64. VIDEO IN Jack
Connect a cable coming from the video out jack of a camcorder, another VCR, or an audio-visual source (laser disc player, video disc player, etc.) here.

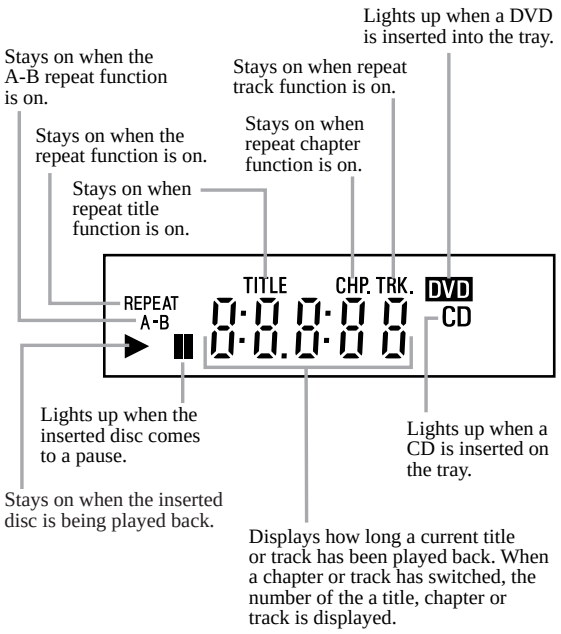
65. DVD/VCR VIDEO OUT Jack
Connect the yellow video cable (supplied) here and to the TV's Video In jack.

66. ANT-OUT (Antenna Out) Jack
Use the supplied RF coaxial cable to connect this jack to the ANTENNA IN Jack on your TV.

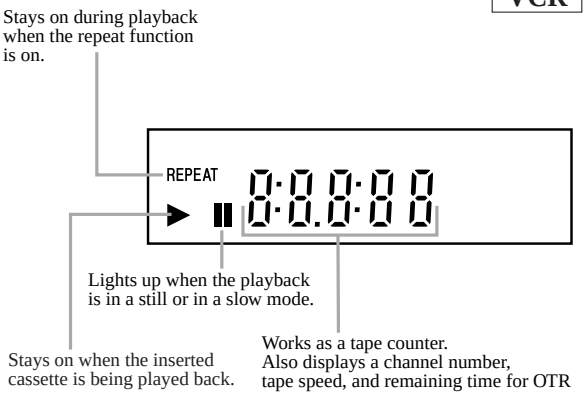
Caution: Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the player.

DISPLAY

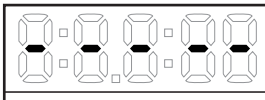
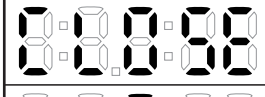
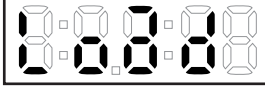
DVD


Lights up when a DVD is inserted into the tray.
Stays on when the A-B repeat function is on.
Stays on when repeat track function is on.
Stays on when repeat chapter function is on.
Stays on when the repeat function is on.
Stays on when repeat title function is on.
TITLE
CHP. TRK.
DVD
CD
REPEAT
A-B
Lights up when the inserted disc comes to a pause.
Lights up when a CD is inserted on the tray.
Stays on when the inserted disc is being played back.
Displays how long a current title or track has been played back. When a chapter or track has switched, the number of the a title, chapter or track is displayed.

VCR


Stays on during playback when the repeat function is on.
REPEAT
Lights up when the playback is in a still or in a slow mode.
Stays on when the inserted cassette is being played back.
Works as a tape counter. Also displays a channel number, tape speed, and remaining time for OTR

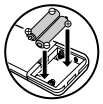
DISPLAYS DURING OPERATION

	No disc inserted or playing DVD menu
	Tray open
	Tray closed
	Loading the Disc

LOADING THE BATTERIES

1. Open the battery compartment cover.

2. Insert two AA batteries (supplied), with each one oriented correctly.



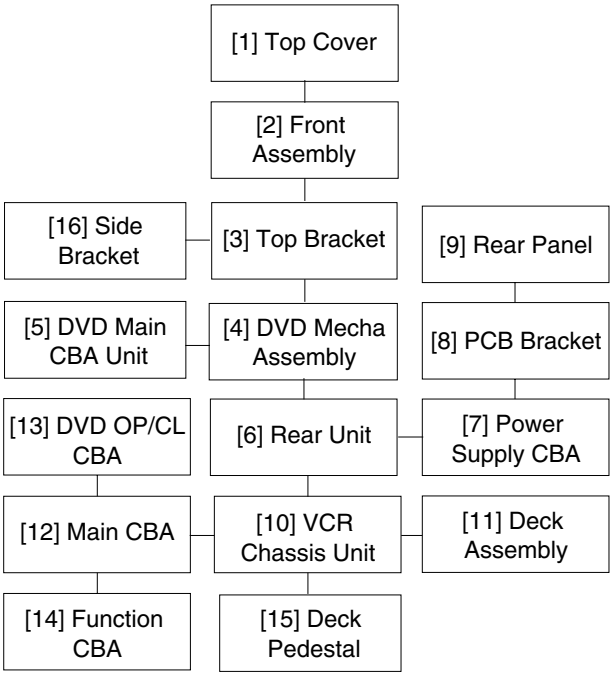
3. Close the cover.

Notes
- Do not mix alkaline and manganese batteries.
- Do not mix old and new batteries.

CABINET DISASSEMBLY INSTRUCTIONS

1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.



2. Disassembly Method

ID/ LOC. No.	PART	REMOVAL		
		Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	Note
[1]	Top Cover	D1	7(S-1)	-
[2]	Front Assembly	D2	(S-3), *7(L-1)	1 1-1 1-2
[3]	Top Bracket	D2	4(S-2)	-
[4]	DVD Mecha Assembly	D3	3(S-4), *CN401, *CN601,*CN302	-
[5]	DVD Main CBA Unit	D4	2(S-5), *CN201, *CN301	2 2-1 2-2 2-3 3
[6]	Rear Unit	D5	5(S-6), 3(S-7), CN1005	-
[7]	Power Suppy CBA	D6	4(S-8)	-
[8]	PCB Brackt	D6	3(S-9)	-
[9]	Rear Panel	D6	----------	-
[10]	VCR Chassis Unit	D7	5(S-10), 4(S-11)	-
[11]	Deck Assembly	D8	Desolder, 2(S-12)	4,5
[12]	Main CBA	D8	----------	-
[13]	Open/ Close CBA	D8	----------	-
[14]	Function CBA	D8	----------	-
[15]	Deck Pedestal	D9	7(S-13)	-
[16]	Side Bracket	D9	(S-14)	-
↓ (1)	↓ (2)	↓ (3)	↓ (4)	↓ (5)

Note:

(1): Identification (location) No. of parts in the figures

(2): Name of the part

(3): Figure Number for reference

(4): Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P=Spring, L=Locking Tab, S=Screw,
CN=Connector
*=Unhook, Unlock, Release, Unplug, or Desolder
e.g. 2(S-2) = two Screws (S-2),
2(L-2) = two Locking Tabs (L-2)

(5): Refer to “Reference Notes.”

Reference Notes

CAUTION 1: Locking Tabs (L-1) are fragile. Be careful not to break them.

1-1. Remove Screw (S-3).

1-2. Release seven Locking Tabs (L-1) (to do this, first release five Locking Tabs (A) at the side and top, and then release two Locking Tabs (B) at the bottom.)

CAUTION 2: Electrostatic breakdown of the laser diode in the optical system block may occur as a potential difference caused by electrostatic charge accumulated on cloth, human body etc., during unpacking or repair work.

To avoid damage of pickup follow next procedures.

2-1. Slide the pickup unit as shown in Fig. D4.

2-2. Short the three short lands of FPC cable with solder before removing the FFC cable (CN301) from it. If you disconnect the FFC cable (CN301), the laser diode of pickup will be destroyed. (Fig. D4)

2-3. Disconnect Connector (CN201). Remove two Screws (S-5) and lift the DVD Main CBA Unit. (Fig. D4)

CAUTION 3: When reassembling, confirm the FFC cable (CN301) is connected completely. Then remove the solder from the three short lands of FPC cable. (Fig. D4)

4. When reassembling, solder wire jumpers as shown in Fig. D8.

5. Before installing the Deck Assembly, be sure to place the pin of LD-SW on Main CBA as shown in Fig. D8. Then, install the Deck Assembly while aligning the hole of Cam Gear with the pin of LD-SW, the shaft of Cam Gear with the hole of LD-SW as shown in Fig. D8.

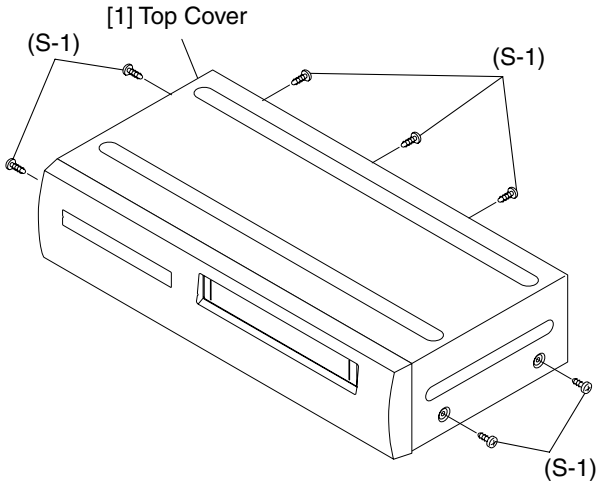


Fig. D1

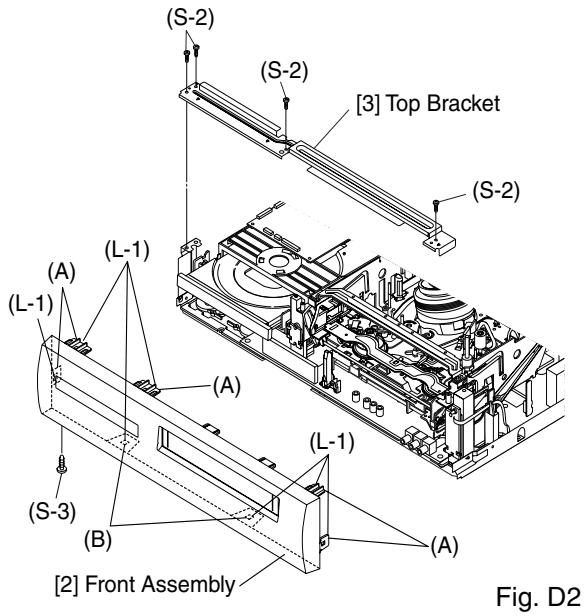


Fig. D2

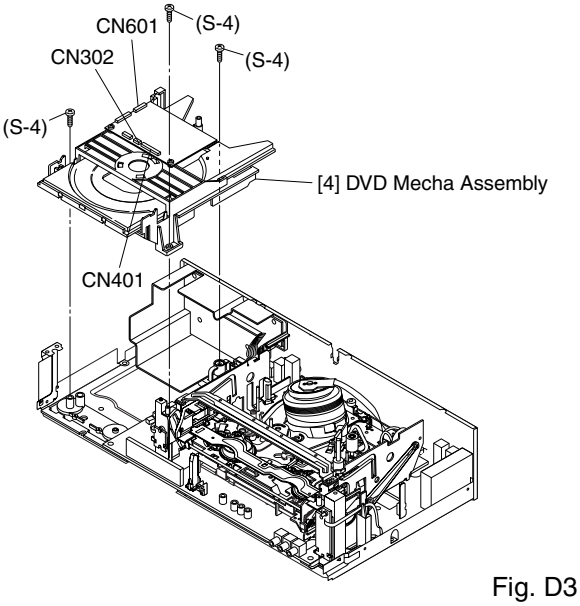
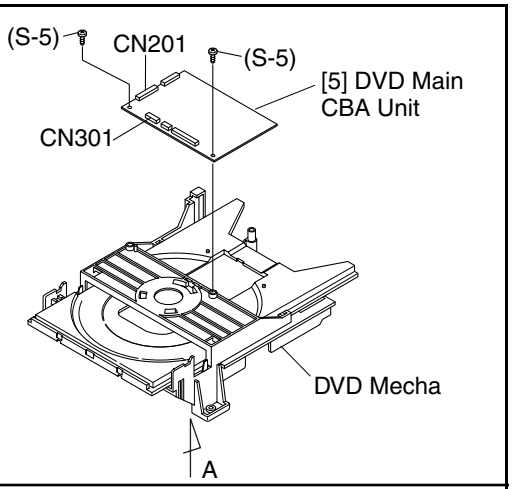


Fig. D3



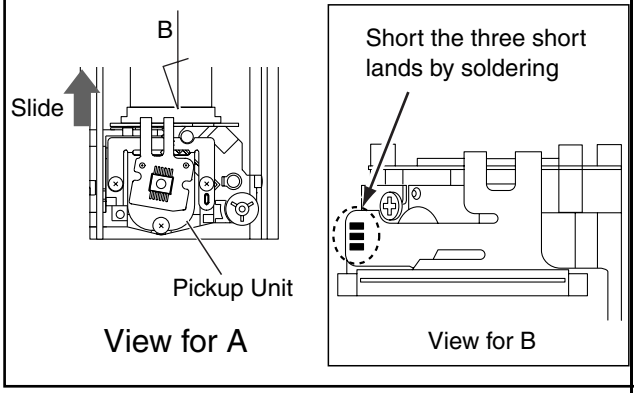


Fig. D4

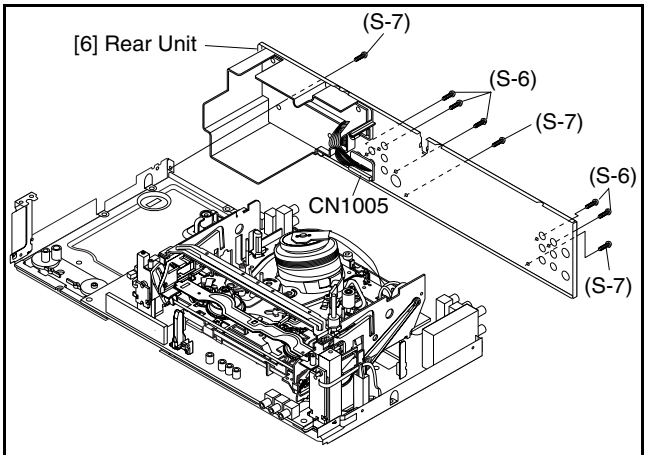


Fig. D5

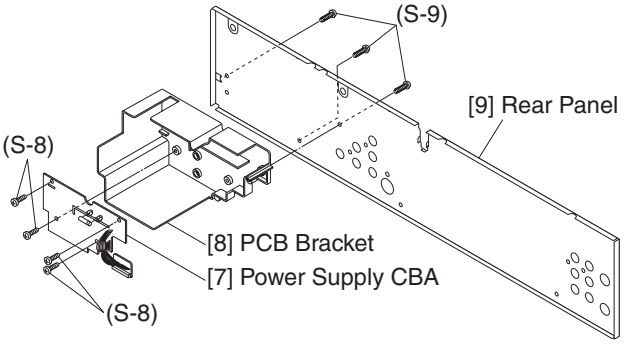


Fig. D6

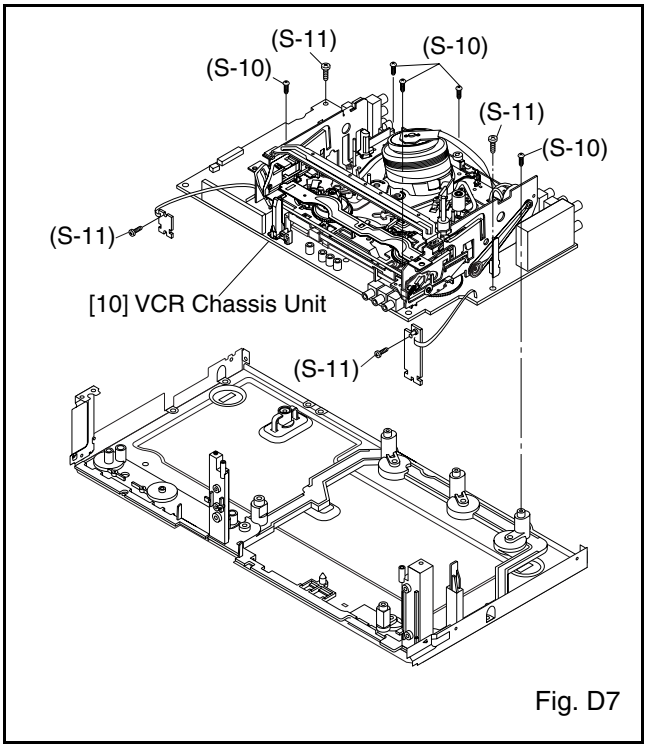
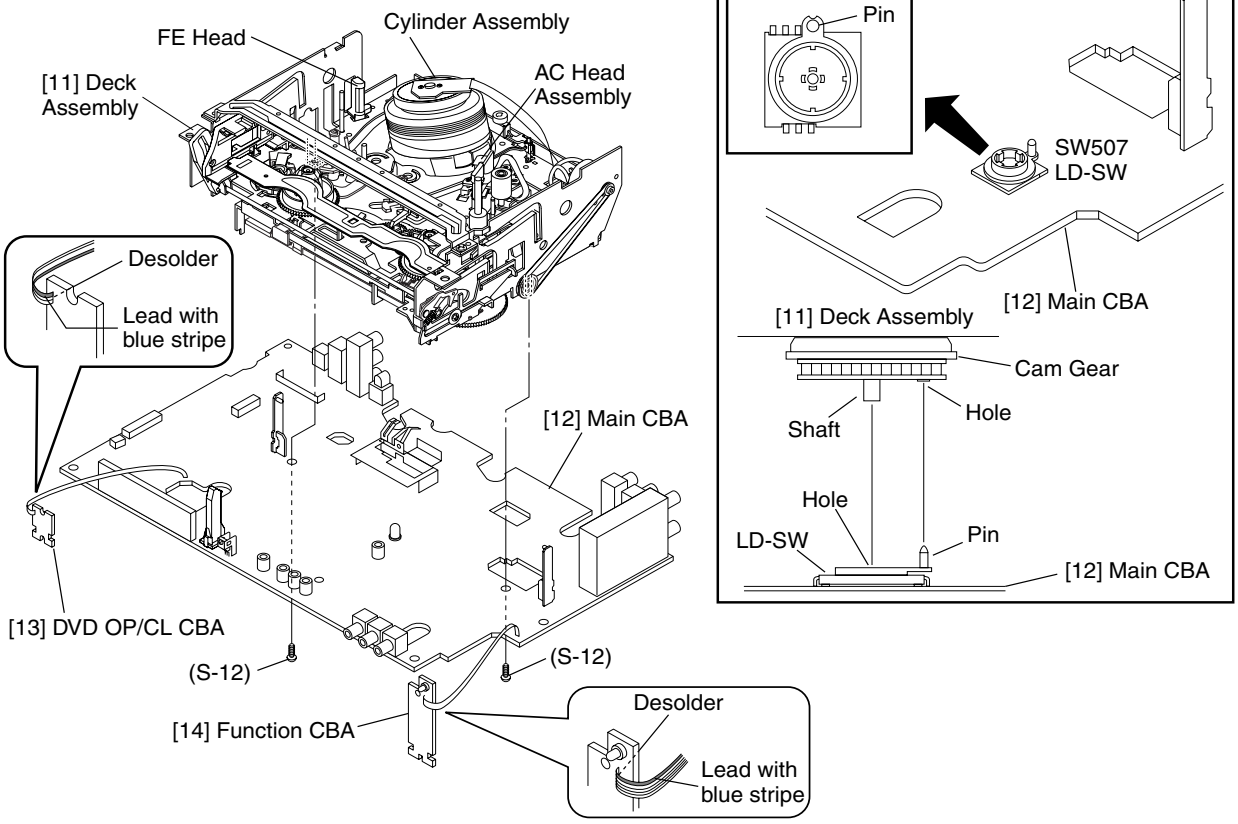
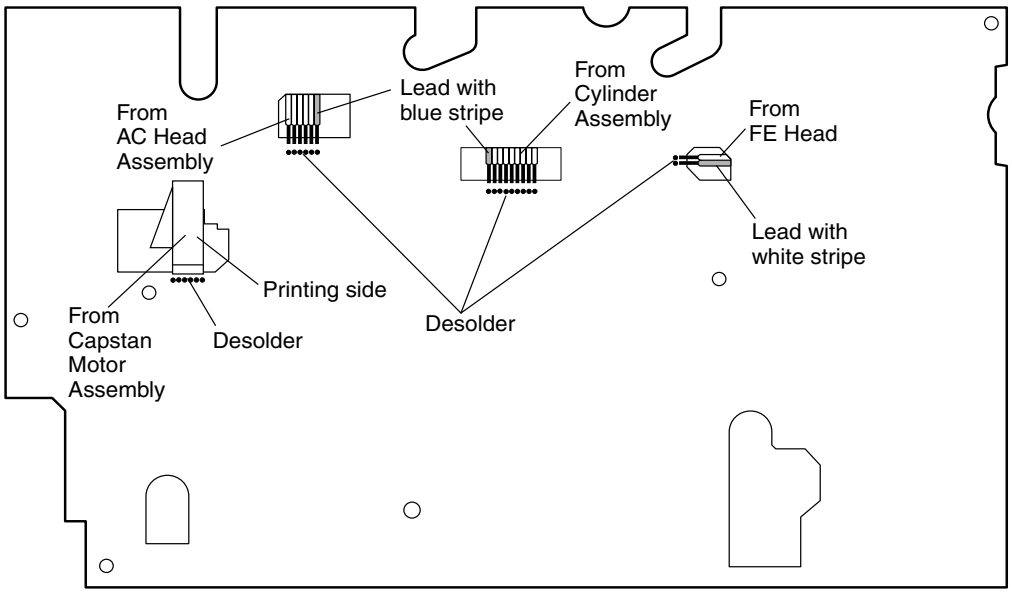


Fig. D7





BOTTOM VIEW

Lead connections of Deck Assembly and Main CBA

Fig. D8

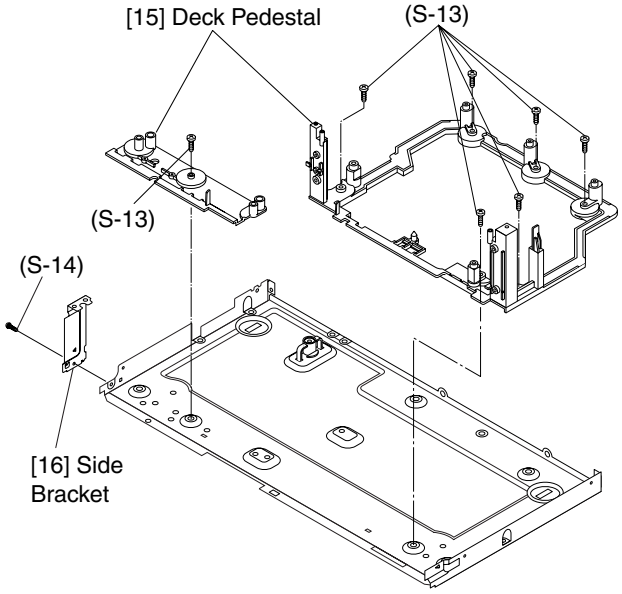
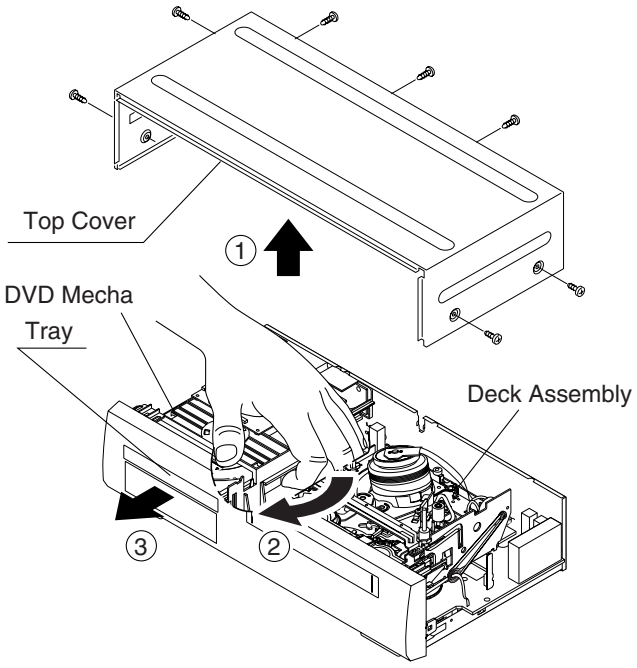
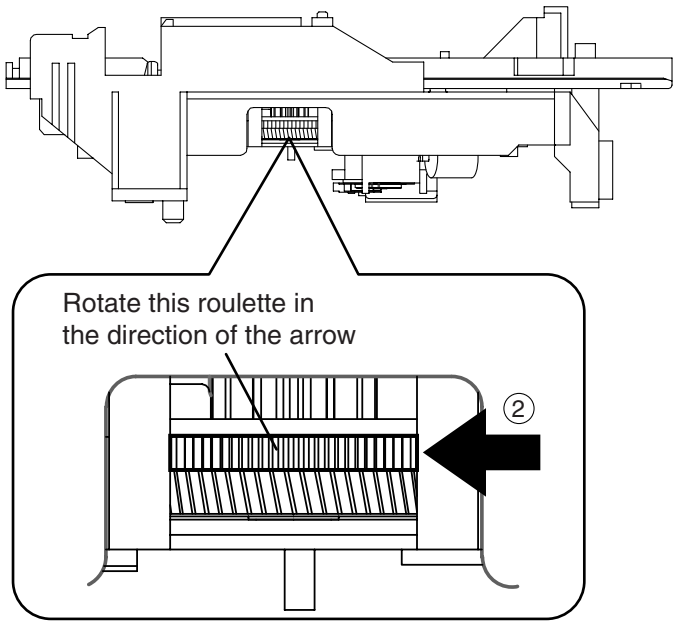


Fig. D9

HOW TO MANUAL EJECT

1. Remove the Top Case.
2. Rotate this roulette in the direction of the arrow as shown below.





ELECTRICAL ADJUSTMENT INSTRUCTIONS

General Note: "CBA" is an abbreviation for "Circuit Board Assembly."

NOTE:

1. Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to do these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.
2. To perform these alignment / confirmation procedures, make sure that the tracking control is set in the center position: Press either "CHANNEL ▼" or "CHANNEL ▲" button on the front panel first, then the "PLAY" button on the front panel.

Test Equipment Required

1. Oscilloscope: Dual-trace with 10:1 probe,
   V-Range: 0.001~50V/Div.,
   F-Range: DC~AC-20MHz
2. Alignment Tape (FL8A)

Head Switching Position Adjustment

Purpose:

To determine the Head Switching point during playback.

Symptom of Misadjustment:

May cause Head Switching noise or vertical jitter in the picture.

Test point	Adj.Point	Mode	Input
TP751(V-OUT) TP302(RF-SW) GND	VR501 (Switching Point) (MAIN CBA)	PLAY (SP)	-----
Tape	**Measurement Equipment**	**Spec.**	
FL8A	Oscilloscope	6.5H±1H (412.7μs±60μs)	

Connections of Measurement Equipment

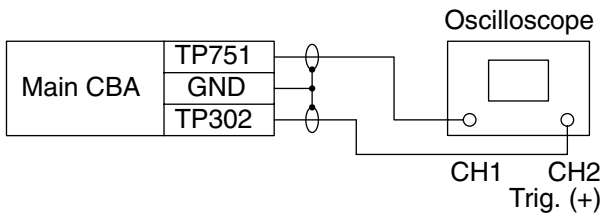
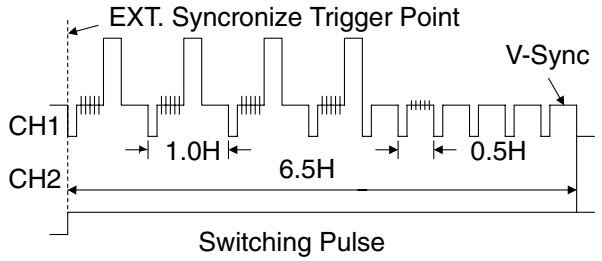


Figure 1



Reference Notes:

Playback the Alignment tape and adjust VR501 so that the V-sync front edge of the CH1 video output waveform is at the 6.5H(412.7μs) delayed position from the rising edge of the CH2 head switching pulse waveform.

FIRMWARE RENEWAL MODE

1. Turn the power on and remove the disc on the tray.
2. To put the DVD player into version up mode, press [9], [8], [7], [6], and [SEARCH MODE] buttons on the remote control unit in that order. The tray will open automatically.
   Fig. a appears on the screen and Fig. b appears on the VFD.

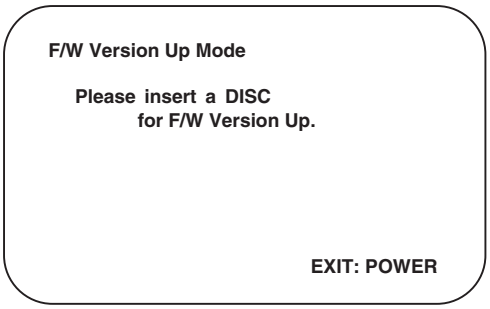


Fig. a Version Up Mode Screen

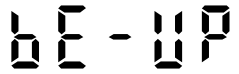


Fig. b VFD in Version Up Mode

   The DVD player can also enter the version up mode with the tray open. In this case, Fig. a will be shown on the screen while the tray is open.
3. Load the disc for version up.
4. The DVD player enters the F/W version up mode automatically. Fig. c appears on the screen and Fig. d appears on the VFD.

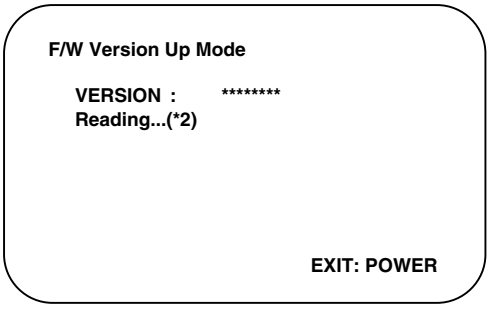


Fig. c Programming Mode Screen

Fig. d VFD in Programming Mode (Example)

   The appearance shown in (*2) of Fig. c is described as follows:

No.	Appearance	State
1	Reading...	Sending files into the memory
2	Erasing...	Erasing previous version data
3	Programming...	Writing new version data

5. After programming is finished, the tray opens automatically. Fig. e appears on the screen and the checksum in (*3) of Fig. e appears on the VFD. (Fig. f)

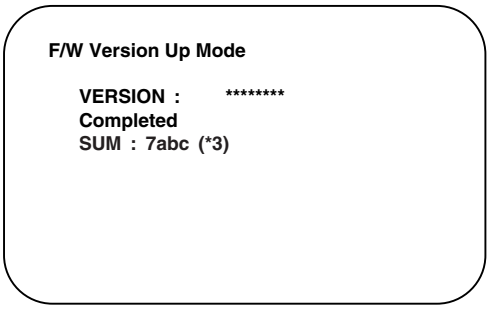


Fig. e Completed Program Mode Screen

Fig. f VFD upon Finishing the Programming Mode (Example)

   At this time, no buttons are available.
6. Unplug the AC cord from the AC outlet. Then plug it again.
7. Turn the power on by pressing the power button and the tray will close.
8. Press [1], [2], [3], [4], and [DISPLAY] buttons on the remote control unit in that order.
   Fig. g appears on the screen.

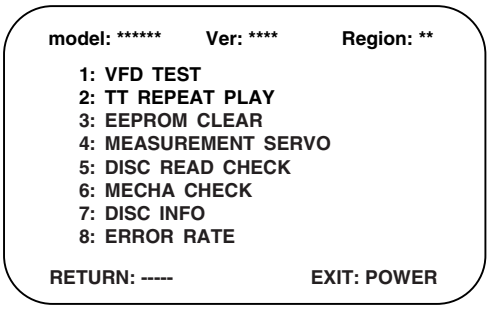


Fig. g

9. Press [3] button on the remote control unit.
   Fig. h appears on the screen.

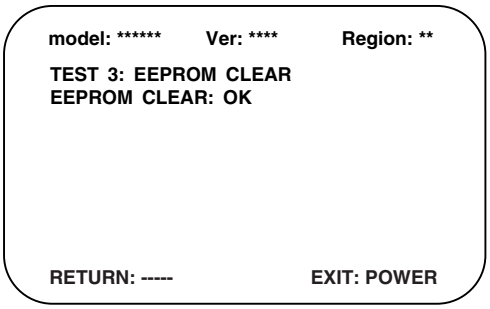
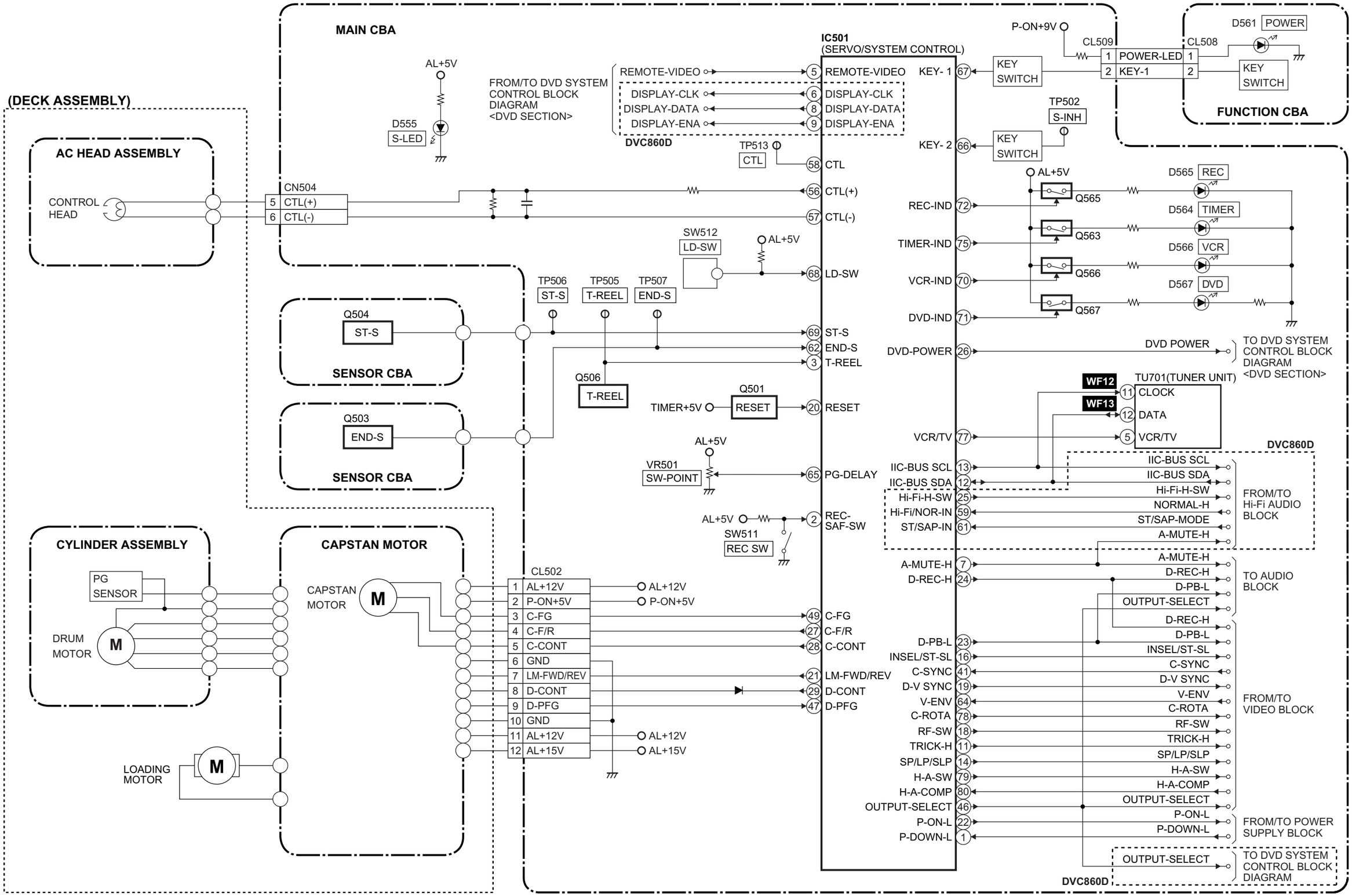


Fig. h

10. To finish this mode, press [POWER] button.

BLOCK DIAGRAMS <VCR SECTION>

Servo/System Control Block Diagram



Video Block Diagram

REC VIDEO SIGNAL | PB VIDEO SIGNAL | DVD VIDEO SIGNAL | MODE: SP/REC

MAIN CBA

TP751 V-OUT WF1
JK751 V-OUT
Q391 BUFFER
IC751 (OUTPUT SELECT)
VCR
DVD
SW CTL
IC501 (OSD)
OSD CHARACTER MIX
FROM SERVO/SYSTEM CONTROL BLOCK DIAGRAM
OUTPUT SELECT
Q760
TU701
WF11
VIDEO IN
VIDEO OUT
WF15
IC301 (Y/C PROCESS)
TUNER
6dB AMP
CCD 1H DELAY
Q301 BUFFER
JK752 REAR V-IN
FROM DVD VIDEO/AUDIO BLOCK DIAGRAM <DVD SECTION>
DVD-VIDEO
REAR
V-AGC
FBC
Y/C MIX
DOC YNR Y/C COMB
LUMINANCE SIGNAL PROCESS
JK753 FRONT V-IN
FRONT
INSEL/ST-SL
D-PB-L
REC/EE/PB
D-REC-H
TRICK-H
TRICK
C-SYNC
C-ROTA
D-V SYNC
SP/LP/SLP
FROM/TO SERVO/SYSTEM CONTROL BLOCK DIAGRAM
SYNC SEPA
CHROMINANCE SIGNAL PROCESS
AGC AMP

(DECK ASSEMBLY)

VIDEO (R)-1 HEAD
VIDEO (L)-1 HEAD
VIDEO (L)-2 HEAD
VIDEO (R)-2 HEAD
CYLINDER ASSEMBLY
CL253
1 V(R)-1
2 V-COM
3 V(L)-1
4 V(L)-2
5 V-COM
6 V(R)-2
TP302 WF2 RF-SW
FROM/TO SERVO/SYSTEM CONTROL BLOCK DIAGRAM
RF-SW
V-ENV
H-A-SW
H-A-COMP
SP
LP/EP
HPF
ENV DET
TP301 C-PB WF3

Audio Block Diagram (DVC860D)

PB-AUDIO SIGNAL REC-AUDIO SIGNAL DVD AUDIO SIGNAL Mode : SP/REC

MAIN CBA

TU701
SIF 15
MOD-A 2
WF10

REAR
JK751
A-OUT (R)
A-OUT (L)
JK756
A-OUT (R)
A-OUT (L)
JK752
A-IN (R)
A-IN (L)

FRONT
JK754
A-IN (L)-F
JK755
A-IN (R)-F

TP753
A-OUT (R)
TP754
A-OUT (L)

IC751
(OUTPUT SELECT)
DVD
VCR
DVD
VCR
SW CTL
4
14
5
3
12
13
9 10 11

Q760
OUTPUT-SELECT
FROM SERVO/SYSTEM CONTOL BLOCK DIAGRAM

DVD-A(R)
DVD-A(L)
FROM DVD VIDEO/ AUDIO BLOCK DIAGRAM <DVD SECTION>

MOD-A
SIF
A-IN (L)-F
A-IN (R)-F
A-OUT (R)
A-IN (R)
A-IN (L)
A-OUT (L)
N-A-OUT
N-A-IN
FROM/TO Hi-Fi AUDIO BLOCK DIAGRAM

IC301
(AUDIO PROCESS)
80
76
78
TUNER
REAR
FRONT
ALC
R
P
LINE AMP
MUTE
96
4
EQ AMP
SP/LP-ON
1
2
3
100
AUTO BIAS
6
7
REC AMP
98
99
D-REC-H
REC/EE/PB
11
12
16

(DECK ASSEMBLY)
AC HEAD ASSEMBLY
AUDIO HEAD
AUDIO ERASE HEAD
FE HEAD
FULL ERASE HEAD

CL504
4 A-PB/REC
3 A-COM
1 AE-H
2 AE-H/FE-H
CL501
1 AE-H/FE-H
2 FE-H-GND

Q422
BIAS OSC
Q421
P-ON+5V
Q423 (PB=ON)
Q425
SWITCHING D-REC OFF
P-ON+5V
Q424
(PB=ON)

D-PB-L
A-MUTE-H
D-REC-H
FROM SERVO/SYSTEM CONTROL BLOCK DIAGRAM

Audio Block Diagram (EWD2203)

PB-AUDIO SIGNAL REC-AUDIO SIGNAL DVD AUDIO SIGNAL Mode : SP/REC

MAIN CBA

TU701
AUDIO-OUT 14 WF14
MOD-A 2 WF10
Q763 BUFFER
Q762 BUFFER
DVD-A(R)
DVD-A(L)
FROM DVD AUDIO BLOCK DIAGRAM <DVD SECTION>

TP753 A-OUT (R)
IC751 (OUTPUT SELECT)
DVD / VCR
TP754 A-OUT (L)
SW CTL
Q760
OUTPUT SELECT
FROM SERVO/SYSTEM CONTOL BLOCK DIAGRAM

REAR
JK751 A-OUT (R) / A-OUT (L)
JK756 A-OUT (R) / A-OUT (L)
JK752 A-IN
FRONT
JK755 A-IN

IC301 (AUDIO PROCESS)
TUNER / LINE 1 / LINE 2
ALC
LINE AMP
MUTE
EQ AMP
SP/LP-ON
AUTO BIAS
REC AMP
D-REC-H
REC/EE/PB
D-PB-L
A-MUTE-H
D-REC-H
FROM SERVO/SYSTEM CONTROL BLOCK DIAGRAM

(DECK ASSEMBLY)
AC HEAD ASSEMBLY
AUDIO HEAD
AUDIO ERASE HEAD
FE HEAD
FULL ERASE HEAD

CL504
4 A-PB/REC
3 A-COM
1 AE-H
2 AE-H/FE-H
CL501
1 FE-H
2 FE-H-GND

Q422 BIAS OSC
Q421
P-ON+5V
Q423 (PB=ON)
Q425 (SWITCHING D-REC OFF)
P-ON+5V
Q424 (PB=ON)

Hi-Fi Audio Block Diagram (DVC860D)

PB-AUDIO SIGNAL REC-AUDIO SIGNAL DVD AUDIO SIGNAL Mode : SP/REC

MAIN CBA

IC451 (MTS/ SAP/ Hi-Fi AUDIO PROCESS/ Hi-Fi HEAD AMP)

SIF (57) → SIF DEMOD

SAP DET, CONT → SAP FILTER → SAP DEMOD

STEREO FILTER (62, 63) → PILOT CANCEL

PILOT DET, STEREO PLL, L-R DEMOD

ST/SAP SW → dBX DEC → MATRIX

DC

SERIAL DATA DECODER ↔ (37) IIC-BUS SDA, (38) IIC-BUS SCL ↔ FROM/TO SERVO/ SYSTEM CONTROL BLOCK

RIPPLE FILTER ← (54) P-ON+9V

FROM/TO AUDIO BLOCK

A-IN(R) (69), A-IN(R)-F (71) → R-CH INSEL (74) → (48, 47)

N-A-OUT (6) ← NOR SW

A-IN(L) (7), A-IN(L)-F (9) → L-CH INSEL (12) → (13, 14)

FROM DVD AUDIO BLOCK <DVD SECTION>: DVD-A(L), DVD-A(R) (12)

R-CH PNR, L-CH PNR; P/R switches; SW NOISE; LIM; DEV; VCO; LPF; COMP; R-CH BPF; L-CH BPF

OUTPUT SELECT; ALC; MUTE; DO DET; ENV DET

MODE OUT (40, 23) → ST/SAP-MODE, NORMAL-H → TO SERVO/SYSTEM CONTROL BLOCK

(4, 80, 2, 78) ↔ N-A-IN, A-OUT (L), MOD-A, A-OUT (R) ↔ FROM/TO AUDIO BLOCK

(77, 1) ↔ (39, 49) Hi-Fi-H-SW, A-MUTE-H ↔ FROM SERVO/SYSTEM CONTROL BLOCK

HOLD PULSE; NOISE DET; MATRIX; COMP → (26)

(34, 33) → R/L → (24, 27)

CL253: Hi-Fi-A(R) 7, Hi-Fi-COM 8, Hi-Fi-A(L) 9

CYLINDER ASSEMBLY

Hi-Fi AUDIO (R) HEAD

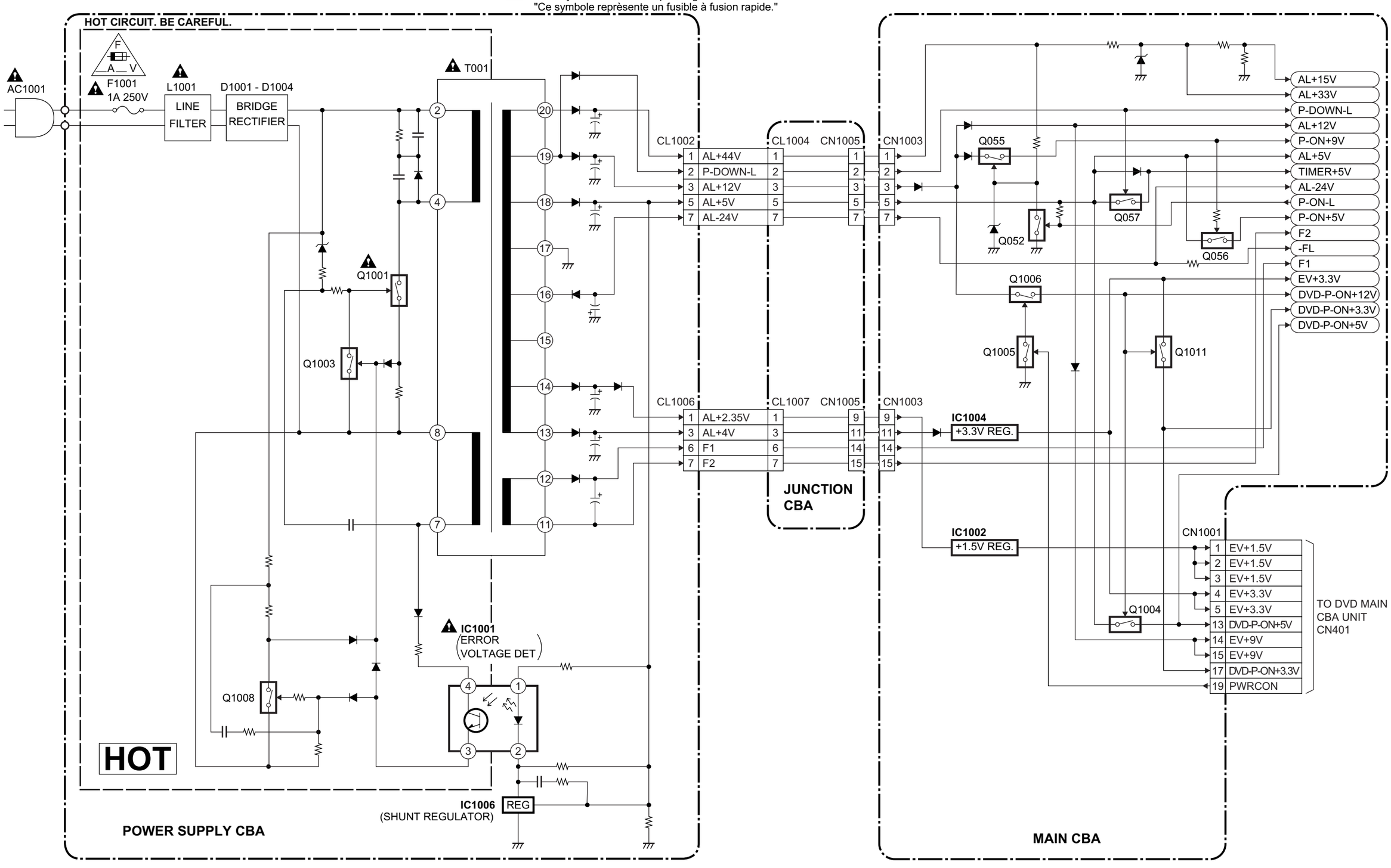
Hi-Fi AUDIO (L) HEAD

Power Supply Block Diagram

NOTE :
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

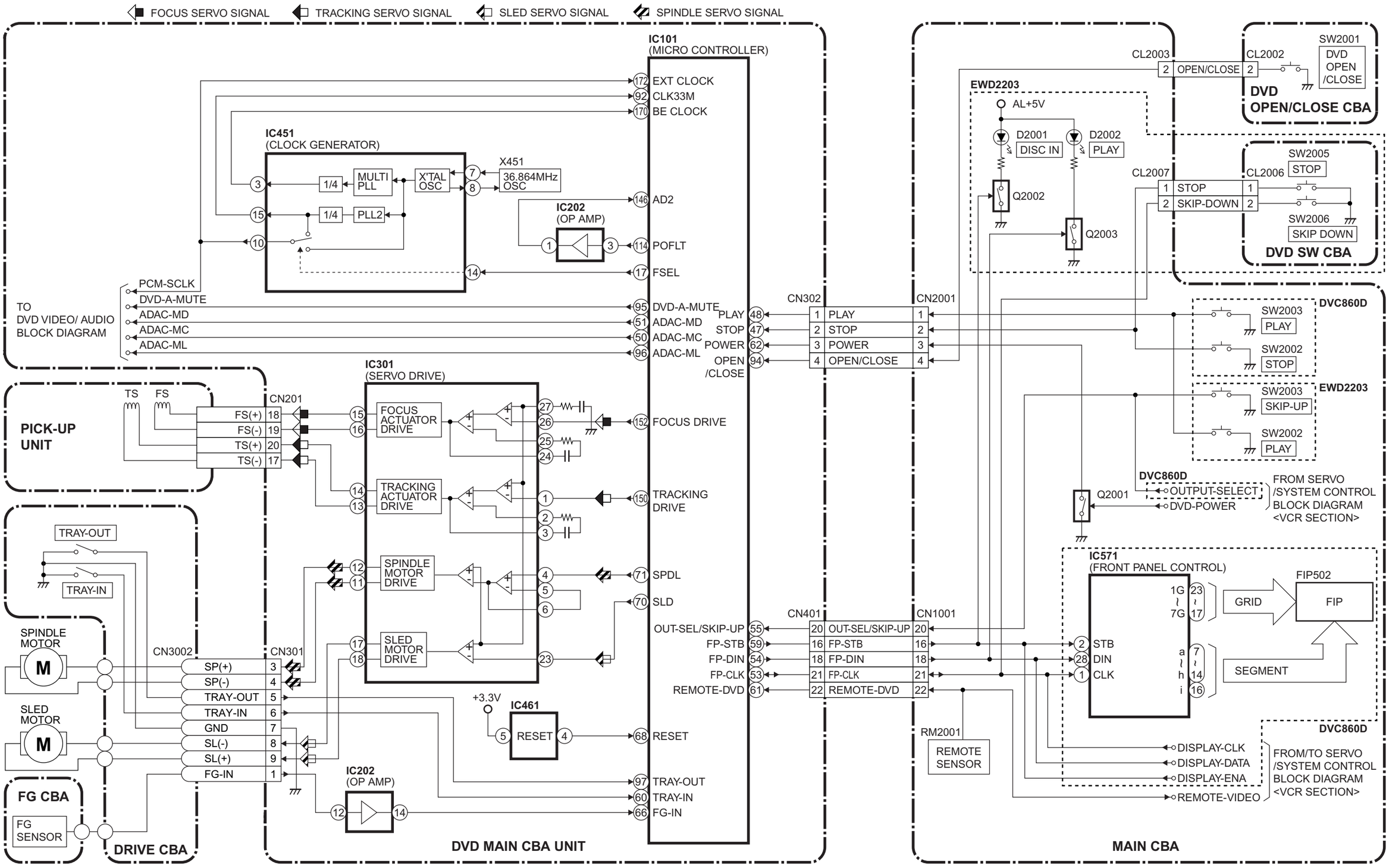
CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.
ATTENTION : POUR UNE PROTECTION CONTINUE LES RISQES D'INCELE N'UTILISER QUE DES FUSIBLE DE MEMO TYPE.
RISK OF FIRE -REPLACE FUSE AS MARKED.
"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit. If Main Fuse (F001) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

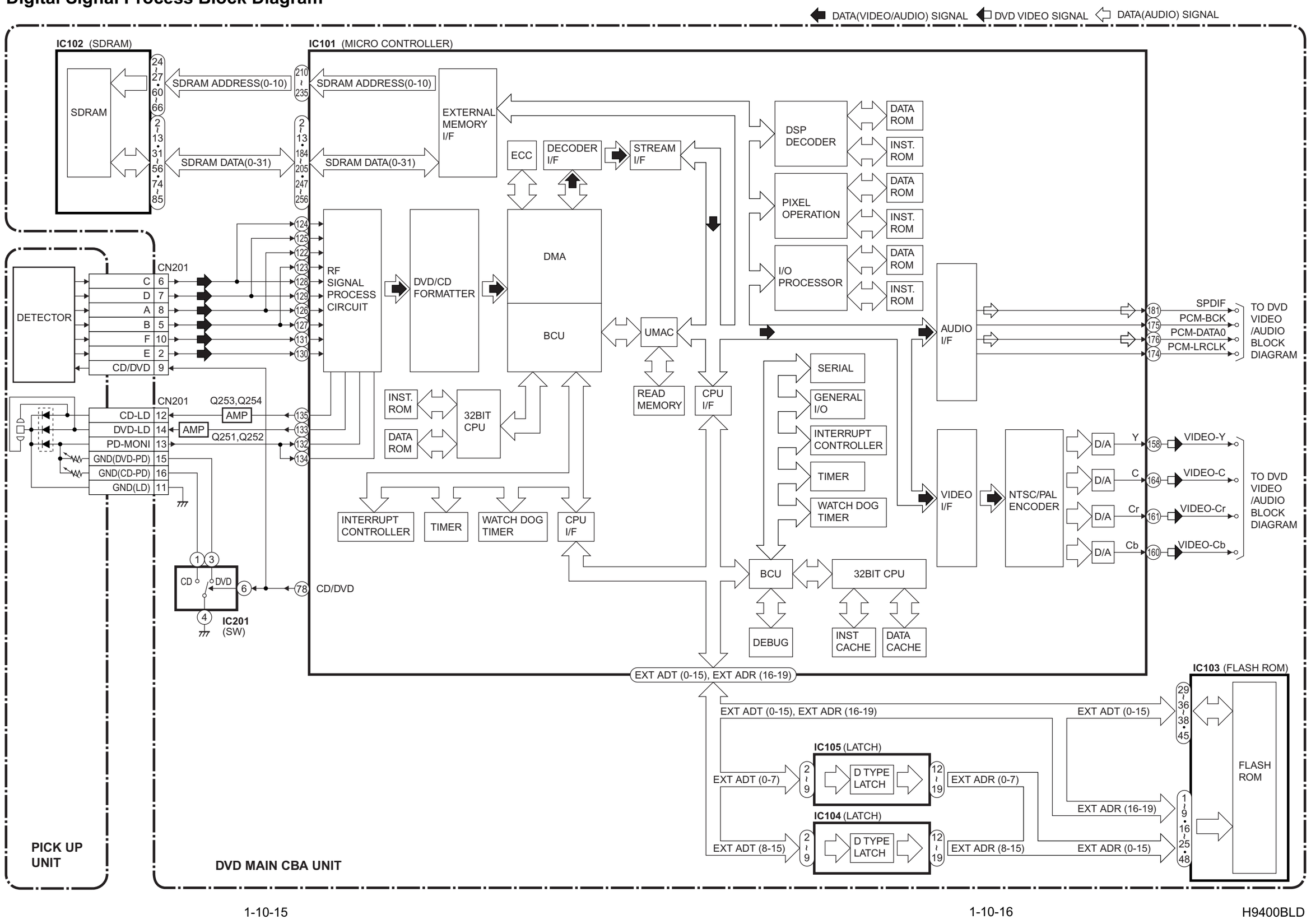


BLOCK DIAGRAMS<DVD SECTION>

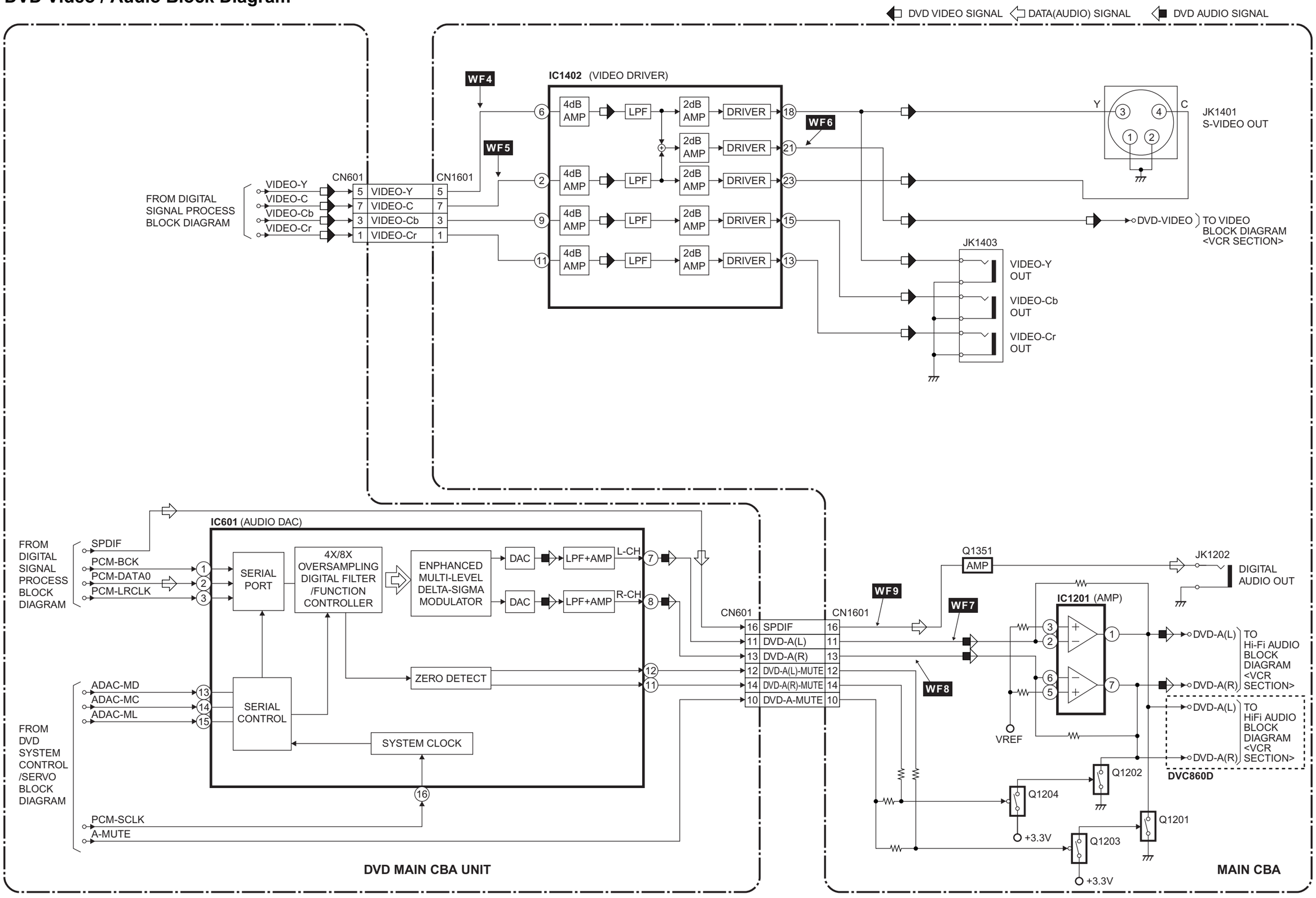
DVD System Control/Servo Block Diagram



Digital Signal Process Block Diagram



DVD Video / Audio Block Diagram



SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

Standard Notes

WARNING

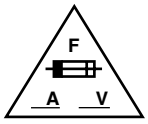
Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark " ⚠ " in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ($K=10^3$, $M=10^6$).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in μF ($P=10^{-6}$ μF).
5. All voltages are DC voltages unless otherwise specified.

LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. CAUTION:



FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQES D'INCELE N'UTILISER QUE DES FUSIBLE DE MEMO TYPE.
RISK OF FIRE-REPLACE FUSE AS MARKED.

This symbol means fast operating fuse.
Ce symbole repròsente un fusible à fusion rapide.

2. CAUTION:

Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F001) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

3. Note:

(1) Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
(2) To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

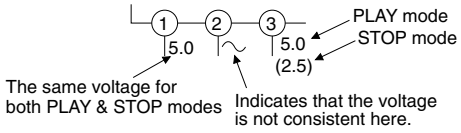
4. Wire Connectors

(1) Prefix symbol "CN" means "connector" (can disconnect and reconnect).
(2) Prefix symbol "CL" means "wire-solder holes of the PCB" (wire is soldered directly).

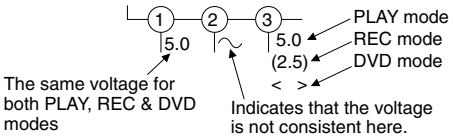
5. Mode: SP/REC

6. Voltage indications for PLAY and REC modes on the schematics are as shown below:

< DVD Section >



< VCR Section >



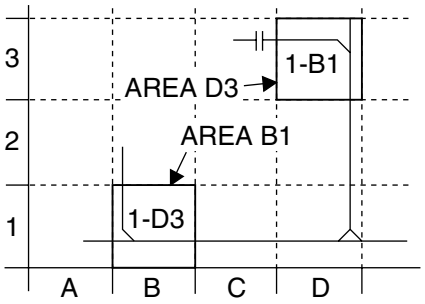
Unit: Volts

7. How to read converged lines

1-D3
Distinction Area
Line Number
(1 to 3 digits)

Examples:

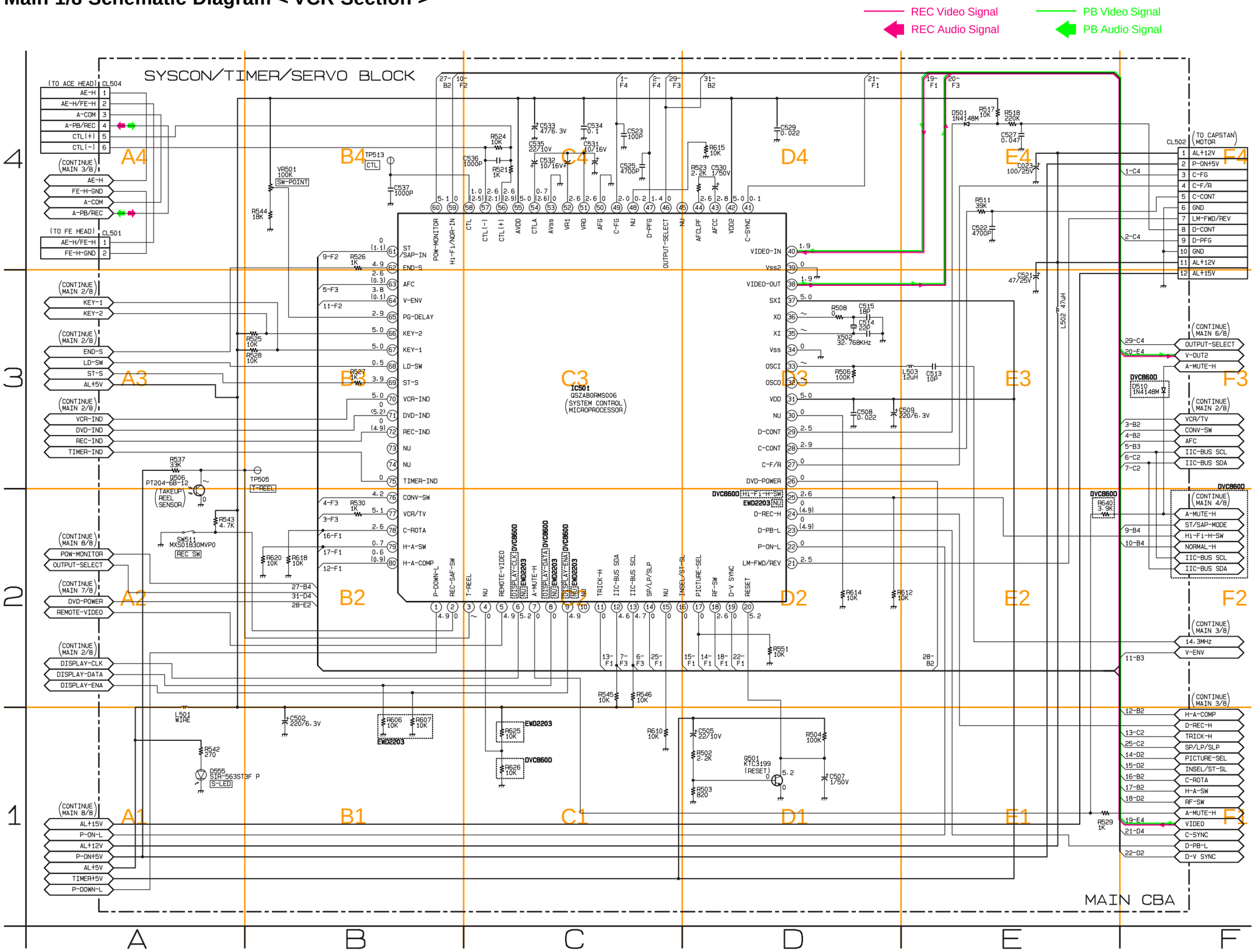
1. "1-D3" means that line number "1" goes to area "D3".
2. "1-B1" means that line number "1" goes to area "B1".



8. Test Point Information

: Indicates a test point with a jumper wire across a hole in the PCB.
: Used to indicate a test point with a component lead on foil side.
: Used to indicate a test point with no test pin.
: Used to indicate a test point with a test pin.

Main 1/8 Schematic Diagram < VCR Section >



MAIN 1/8 Schematic Diagram
Parts Location Guide

Ref No.	Position
ICS	
IC501	C-3
COILS	
L501	A-1
L502	E-3
L503	E-3
TRANSISTORS	
Q501	D-1
Q506	A-3
VARIABLE RESISTORS	
VR501	B-4
TEST POINTS	
TP505	B-3
TP513	B-4

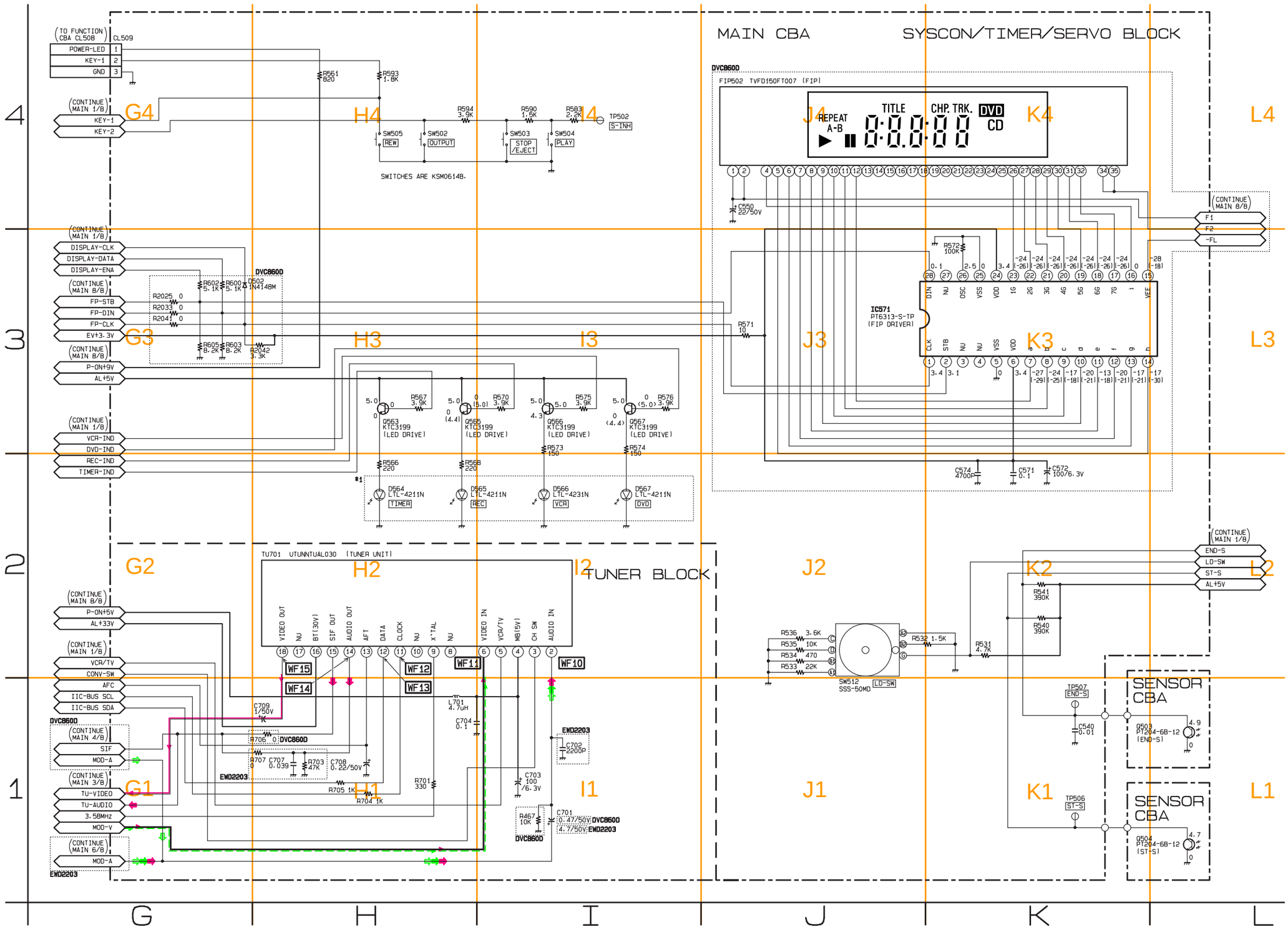
Main 2/8 Schematic Diagram < VCR Section >

✱1 Note:
When it is necessary to replace one or more of the following Diodes, all four should be replaced: D564, D565, D566, D567.

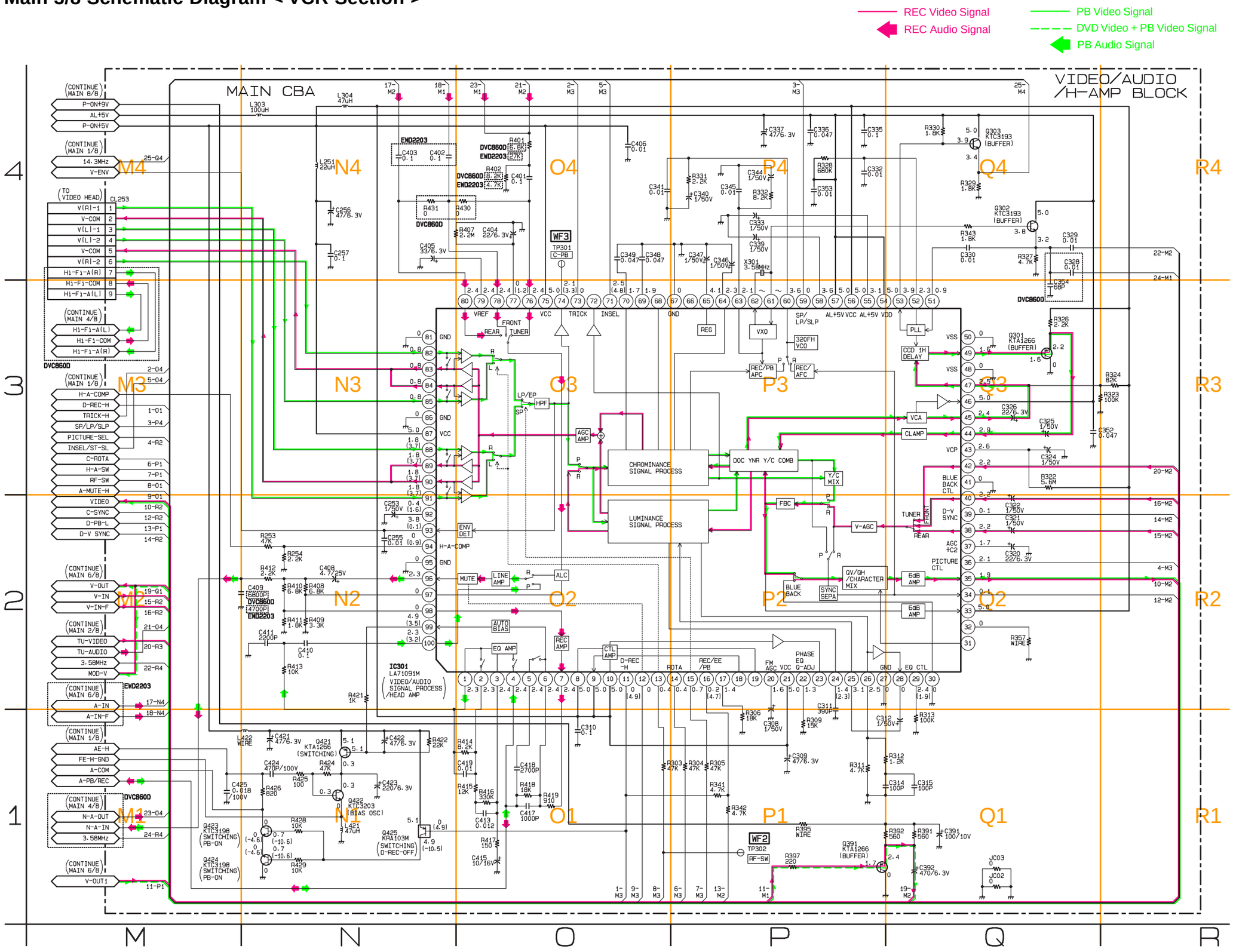
REC Video Signal
REC Audio Signal
DVD Video + PB Video Signal
PB Audio Signal
SPINDLE SERVO Signal

MAIN 2/8 Schematic Diagram
Parts Location Guide

Ref No.	Position
ICS	
IC571	J-3
COILS	
L701	H-1
TRANSISTORS	
Q503	L-1
Q504	L-1
Q563	H-3
Q565	H-3
Q566	I-3
Q567	I-3
TEST POINTS	
TP502	I-4
TP506	K-1
TP507	K-1



Main 3/8 Schematic Diagram < VCR Section >



MAIN 3/8 Schematic Diagram
Parts Location Guide

Ref No.	Position
ICS	
IC301	N-2
COILS	
L251	N-4
L303	N-4
L304	N-4
L421	N-1
L422	N-1
TRANSISTORS	
Q301	Q-3
Q302	Q-4
Q303	Q-4
Q391	P-1
Q421	N-1
Q422	N-1
Q423	N-1
Q424	N-1
Q425	N-1
TEST POINTS	
TP301	O-4
TP302	P-1

Main 4/8 Schematic Diagram (DVC860D) < VCR Section >

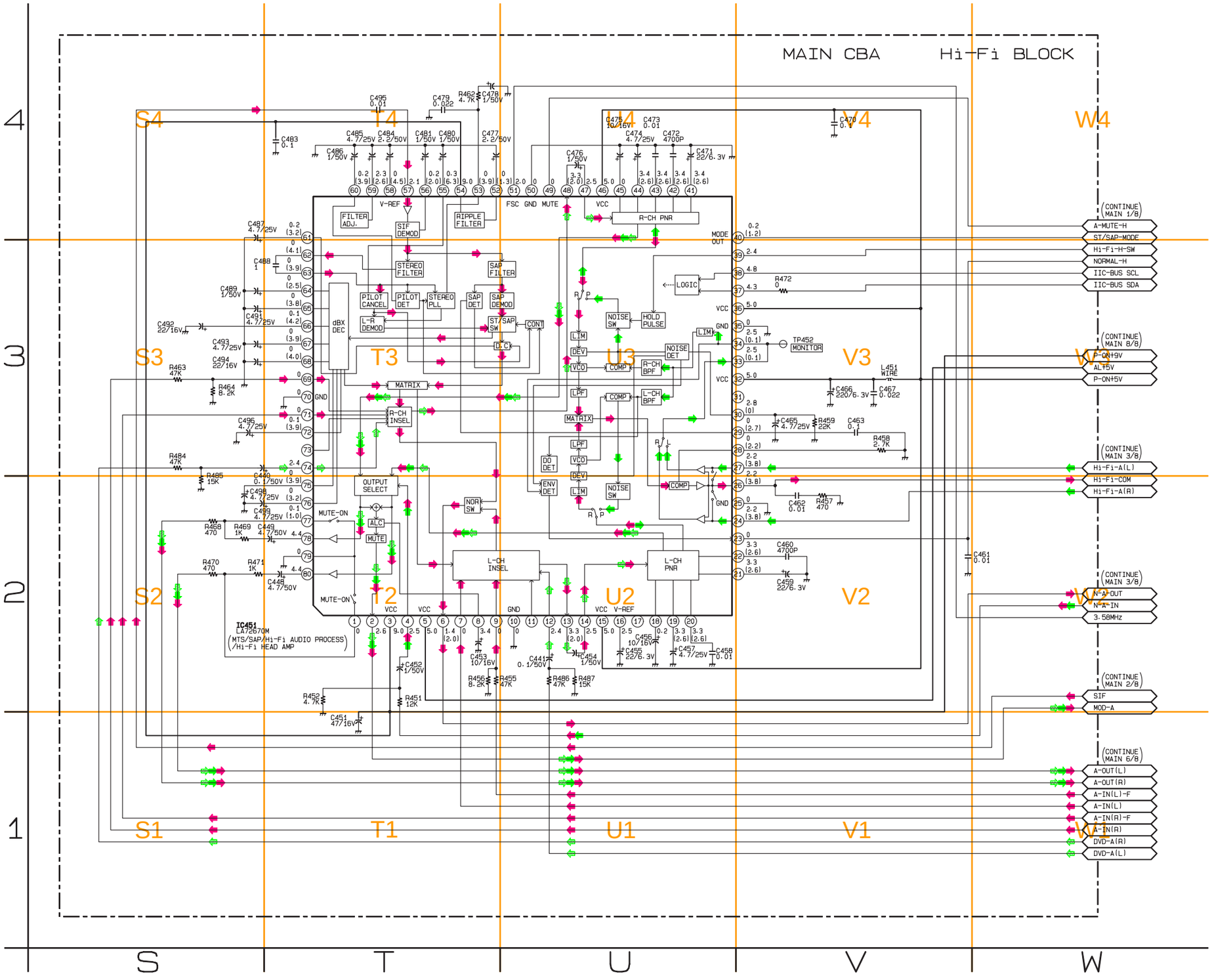
REC Audio Signal

PB Audio Signal

SPINDLE SERVO SIGNAL

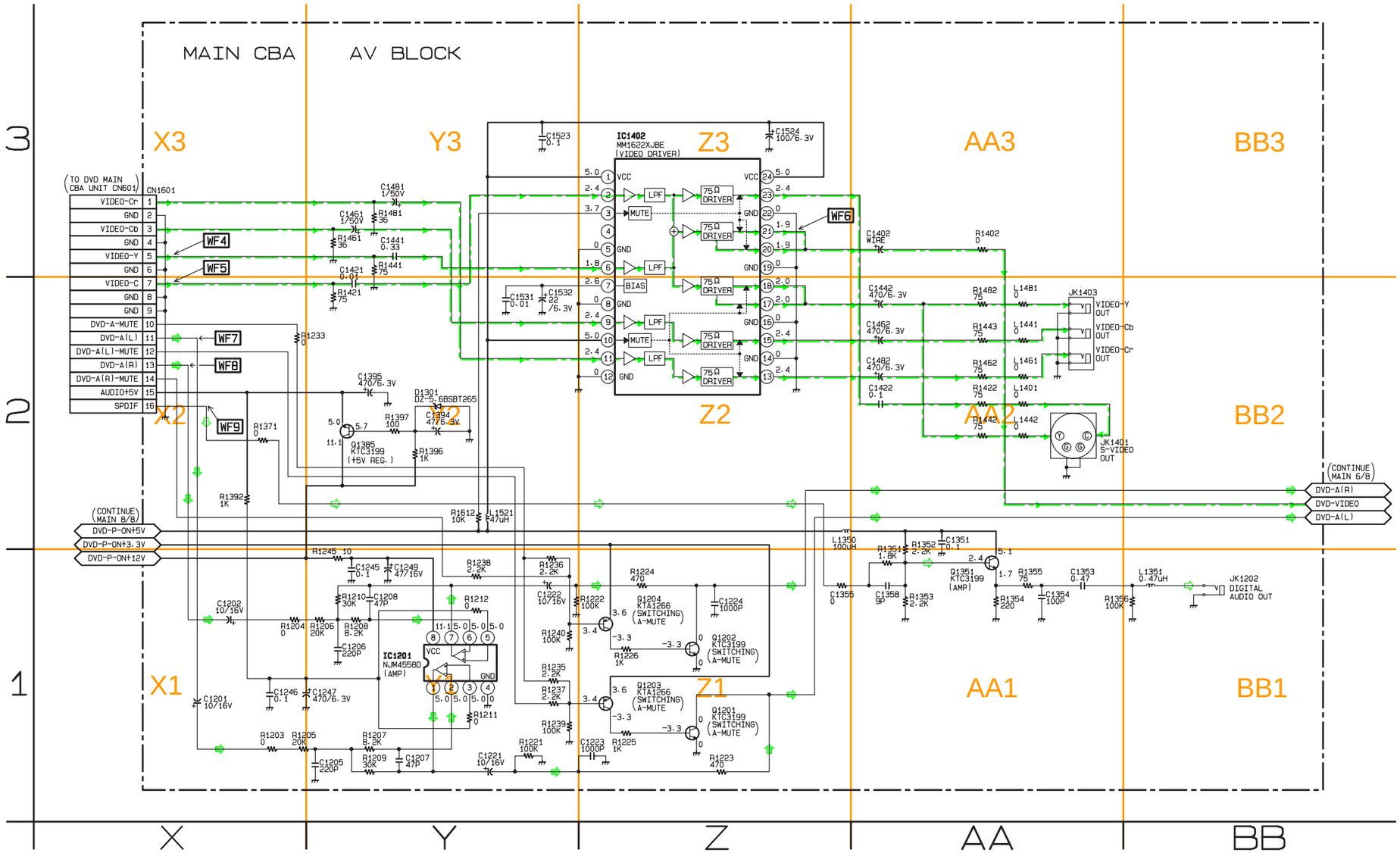
MAIN 4/8 Schematic Diagram
Parts Location Guide

Ref No.	Position
ICS	
IC451	S-2
COILS	
L451	V-3
TEST POINTS	
TP452	V-3



Main 5/8 Schematic Diagram < VCR Section >

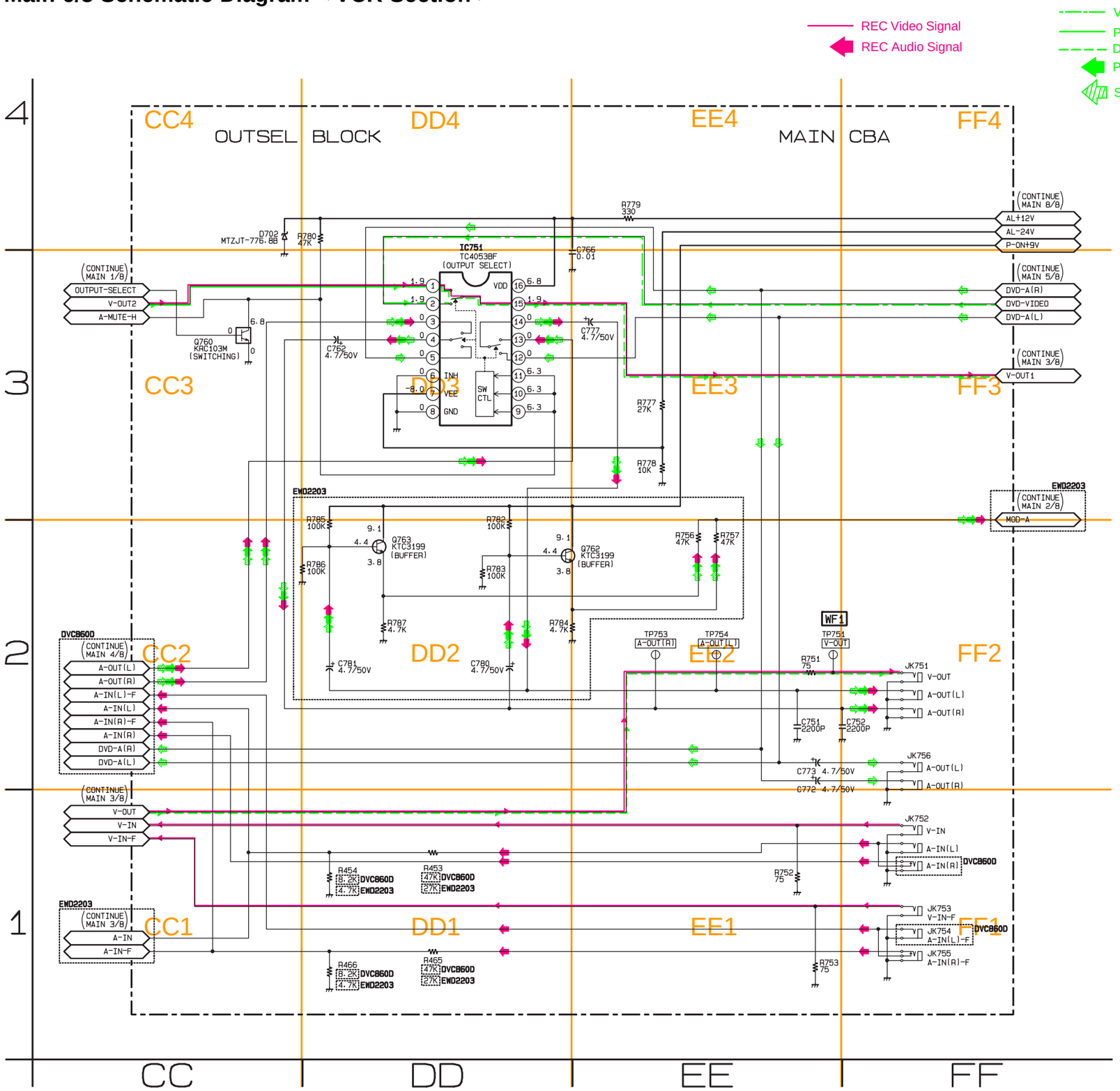
VIDEO SIGNAL SPINDLE SERVO SIGNAL DATA(AUDIO)



MAIN 5/8 Schematic Diagram
Parts Location Guide

Ref No.	Position
ICS	
IC1201	Y-1
IC1402	Z-3
COILS	
L1350	Z-2
L1351	BB-1
L1401	AA-1
L1441	AA-1
L1442	AA-1
L1461	AA-1
L1481	AA-1
L1521	Y-2
TRANSISTORS	
Q1201	Z-1
Q1202	Z-1
Q1203	Z-1
Q1204	Z-1
Q1351	AA-1
Q1385	Y-2
CONNECTORS	
CN1601	X-3

Main 6/8 Schematic Diagram < VCR Section >



MAIN 6/8 Schematic Diagram
Parts Location Guide

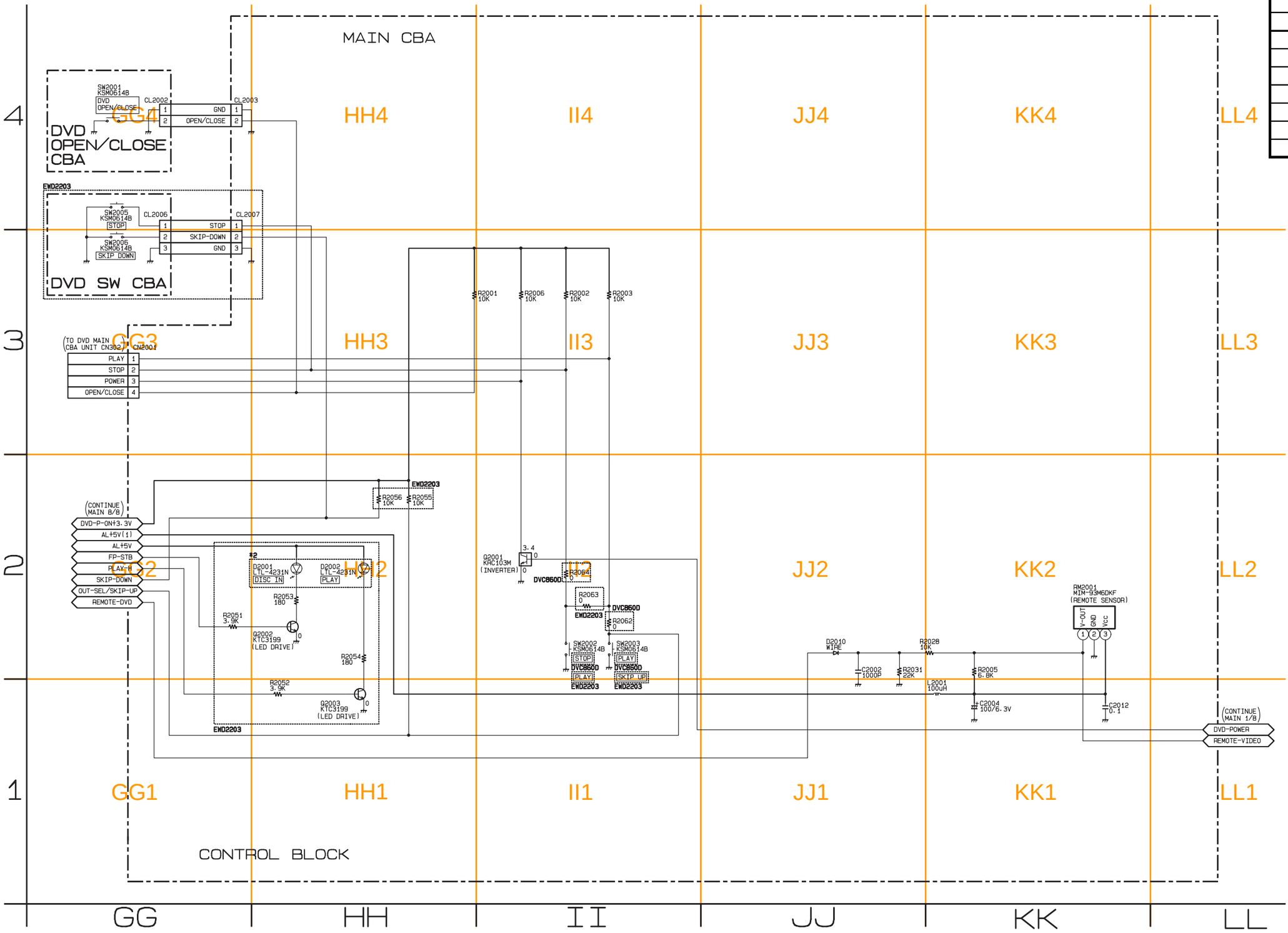
Ref No.	Position
ICS	
IC751	DD-3
TRANSISTORS	
Q760	CC-3
Q762	DD-2
Q763	DD-2
TEST POINTS	
TP751	EE-2
TP753	EE-2
TP754	EE-2

Main 7/8 Schematic Diagram < VCR Section >

✱2 Note:
When it is necessary to replace one or more of the following Diodes, all two should be replaced: D2001, D2002.

MAIN 7/8 Schematic Diagram
Parts Location Guide

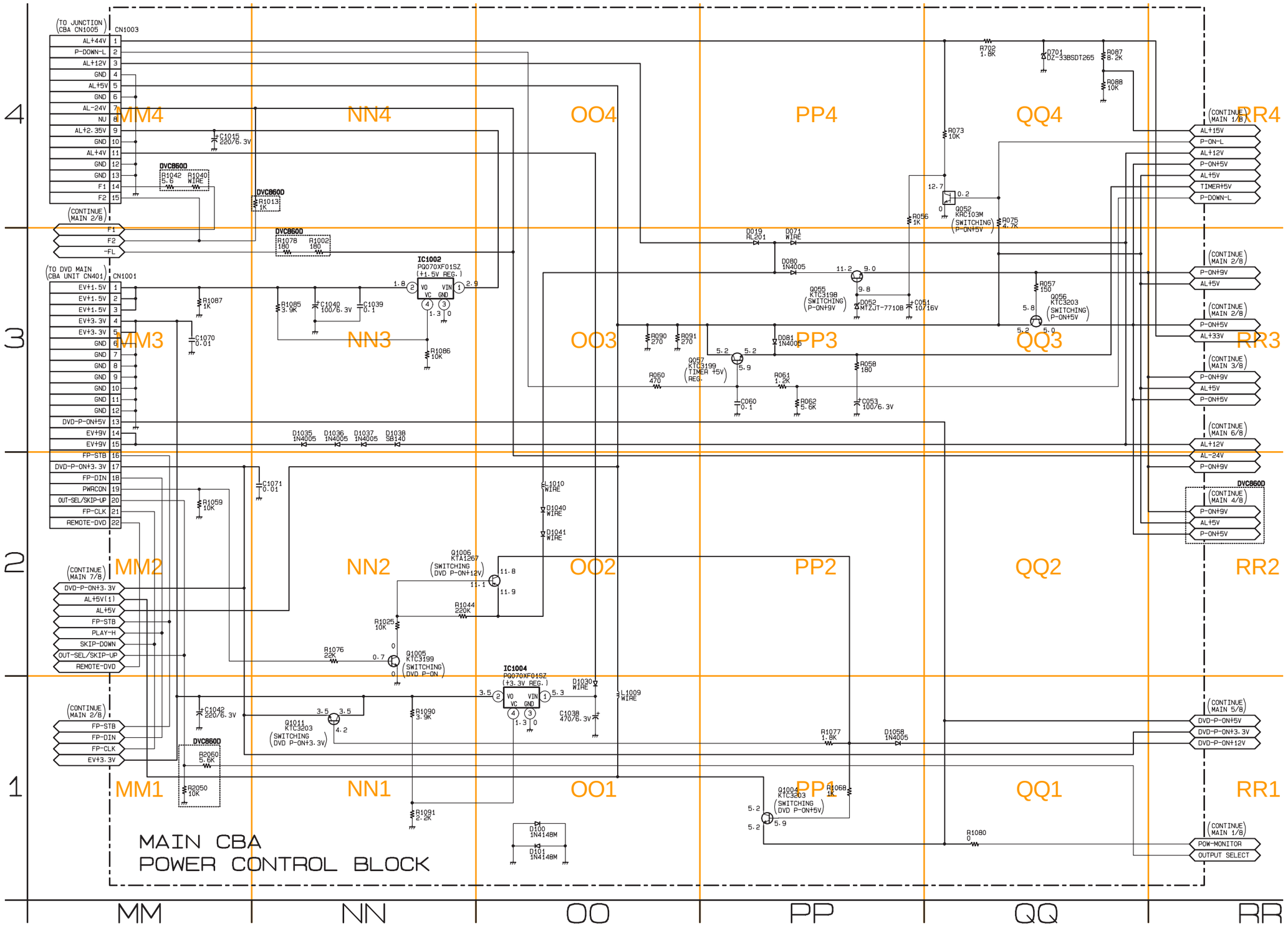
Ref No.	Position
COILS	
L2001	KK-1
TRANSISTORS	
Q2001	II-2
Q2002	HH-2
Q2003	HH-1
CONNECTORS	
CN2001	GG-3



Main 8/8 Schematic Diagram < VCR Section >

MAIN 8/8 Schematic Diagram
Parts Location Guide

Ref No.	Position
ICS	
IC1002	NN-3
IC1004	OO-1
COILS	
L1009	OO-1
L1010	OO-2
TRANSISTORS	
Q052	QQ-4
Q055	PP-3
Q056	QQ-3
Q057	PP-3
Q1004	PP-1
Q1005	NN-2
Q1006	OO-2
Q1011	NN-1
CONNECTORS	
CN1001	MM-3
CN1003	MM-4



Power Supply Schematic Diagram < VCR Section >

CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE FUSE.
ATTENTION : POUR UNE PROTECTION CONTINUE LES RISQES
D'INCELE N'UTILISER QUE DES FUSIBLE DE MÊME TYPE.
RISK OF FIRE-REPLACE FUSE AS MARKED.

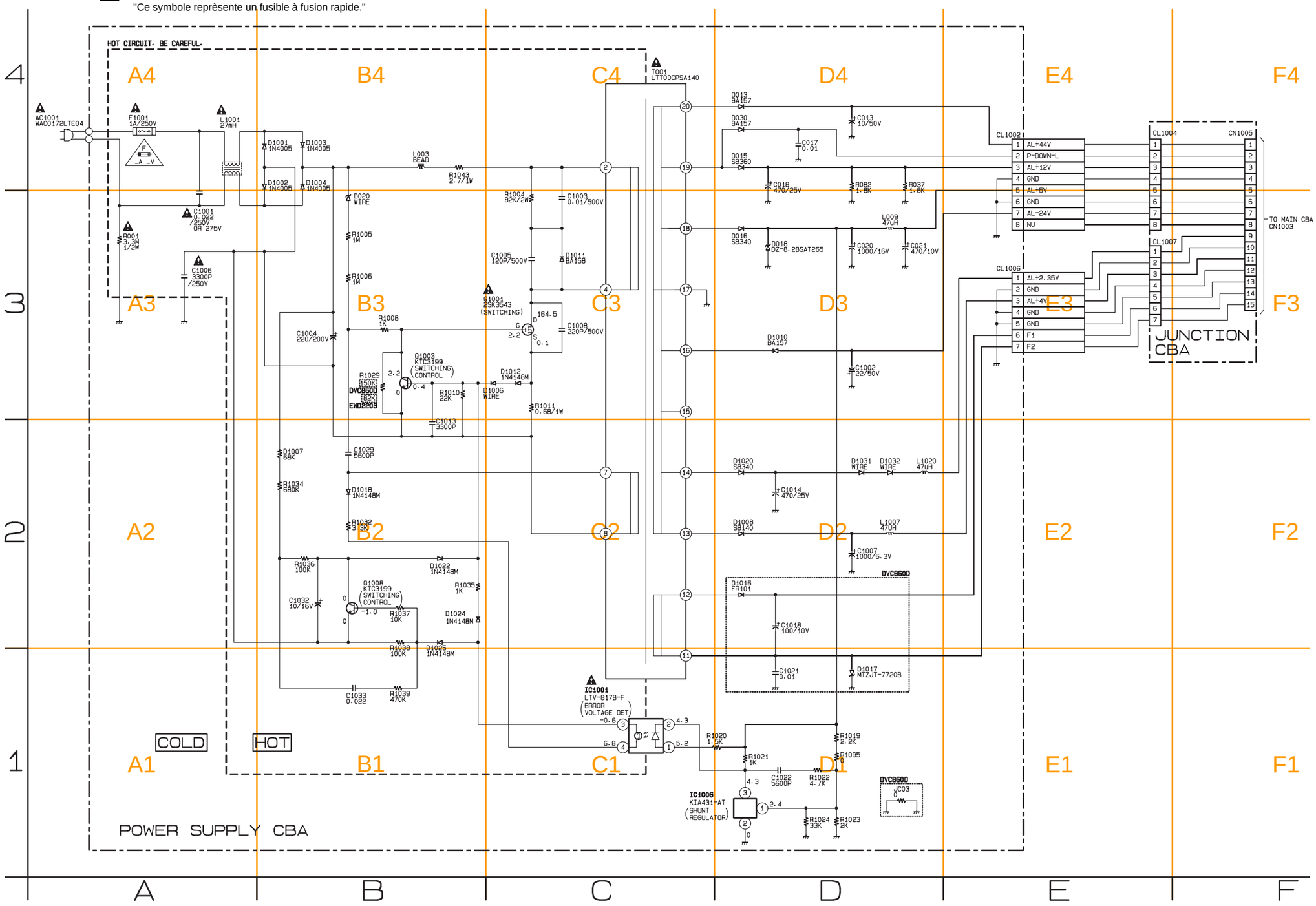
"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

NOTE :
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

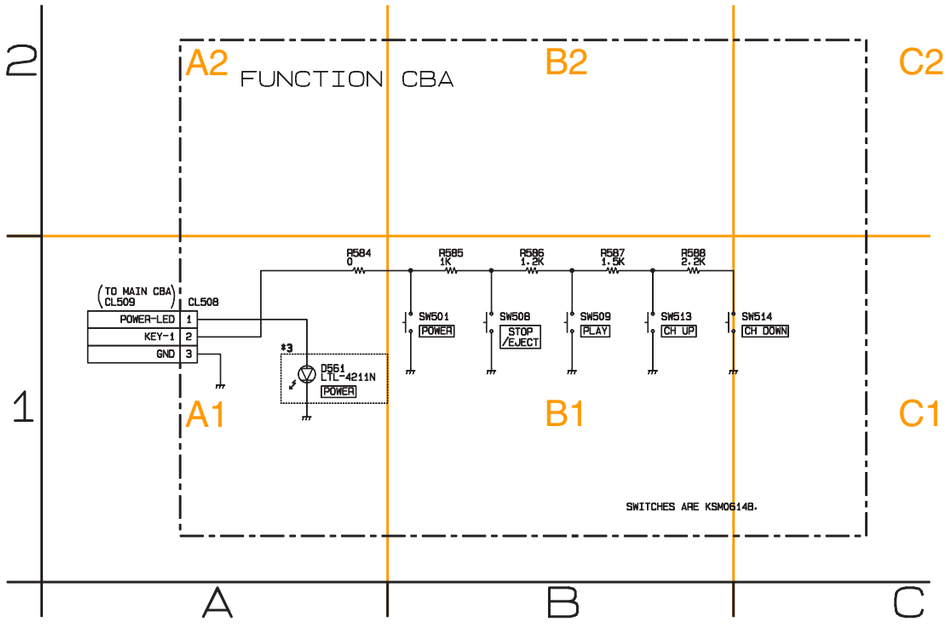
Power Supply Schematic Diagram
Parts Location Guide

Ref No.	Position
ICS	
IC1001	C-1
IC1006	D-1
COILS	
L009	D-3
L1001	A-4
L1007	D-2
L1020	D-2
TRANSISTORS	
Q1001	C-3
Q1003	B-3
Q1008	B-2



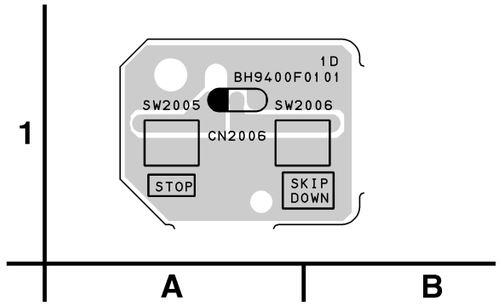
Function Schematic Diagram < VCR Section >

*3 **Note:**
When it is necessary to replace one or more of the following Diodes, all one should be replaced: D561.

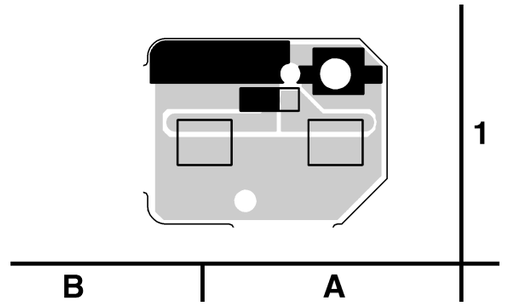


H9400SCF

DVD SW CBA Top View

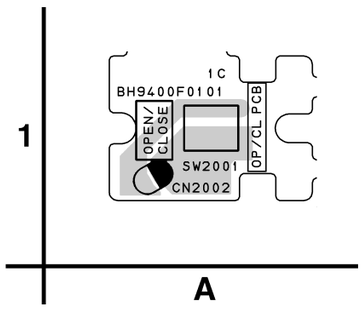


DVD SW CBA Bottom View

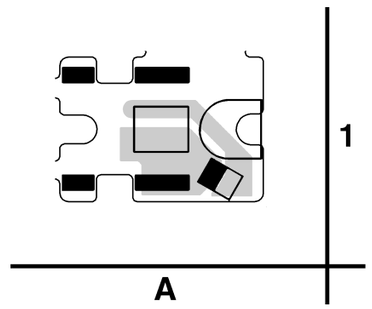


BH9400F01011D

DVD OP/CL CBA Top View

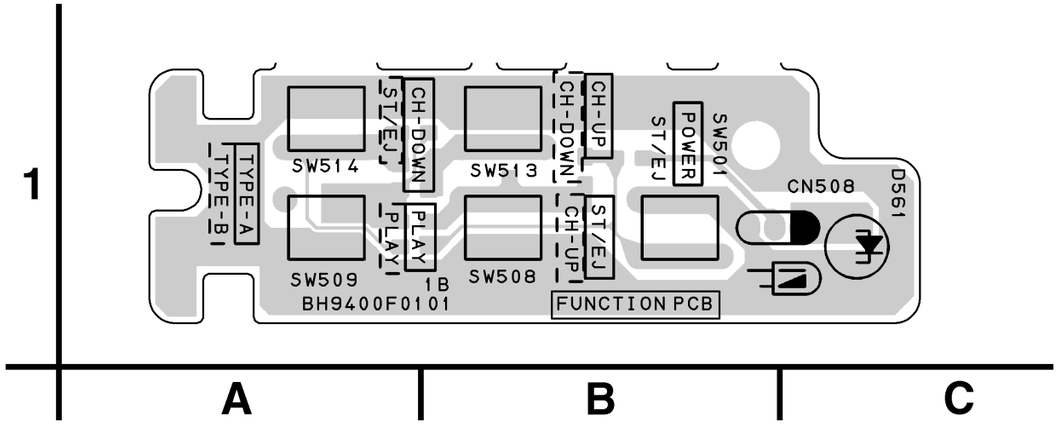


DVD OP/CL CBA Bottom View

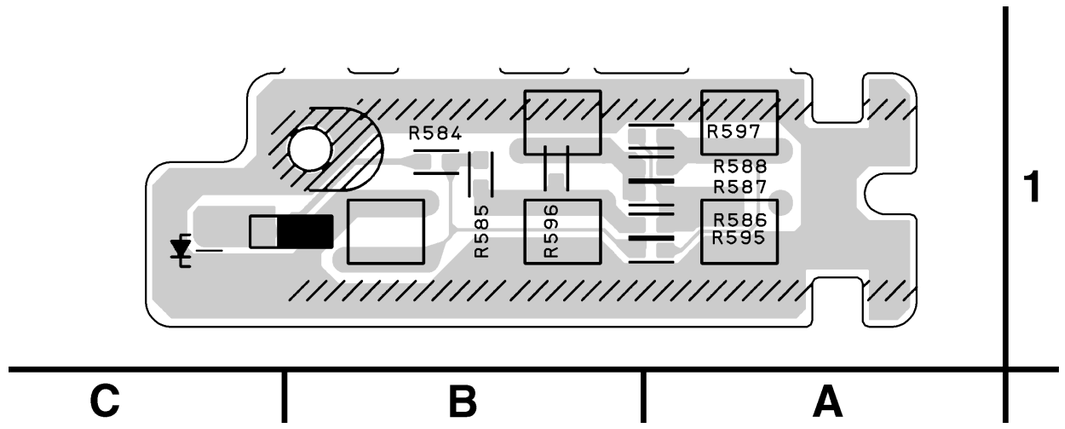


BH9400F01011C

Function CBA Top View



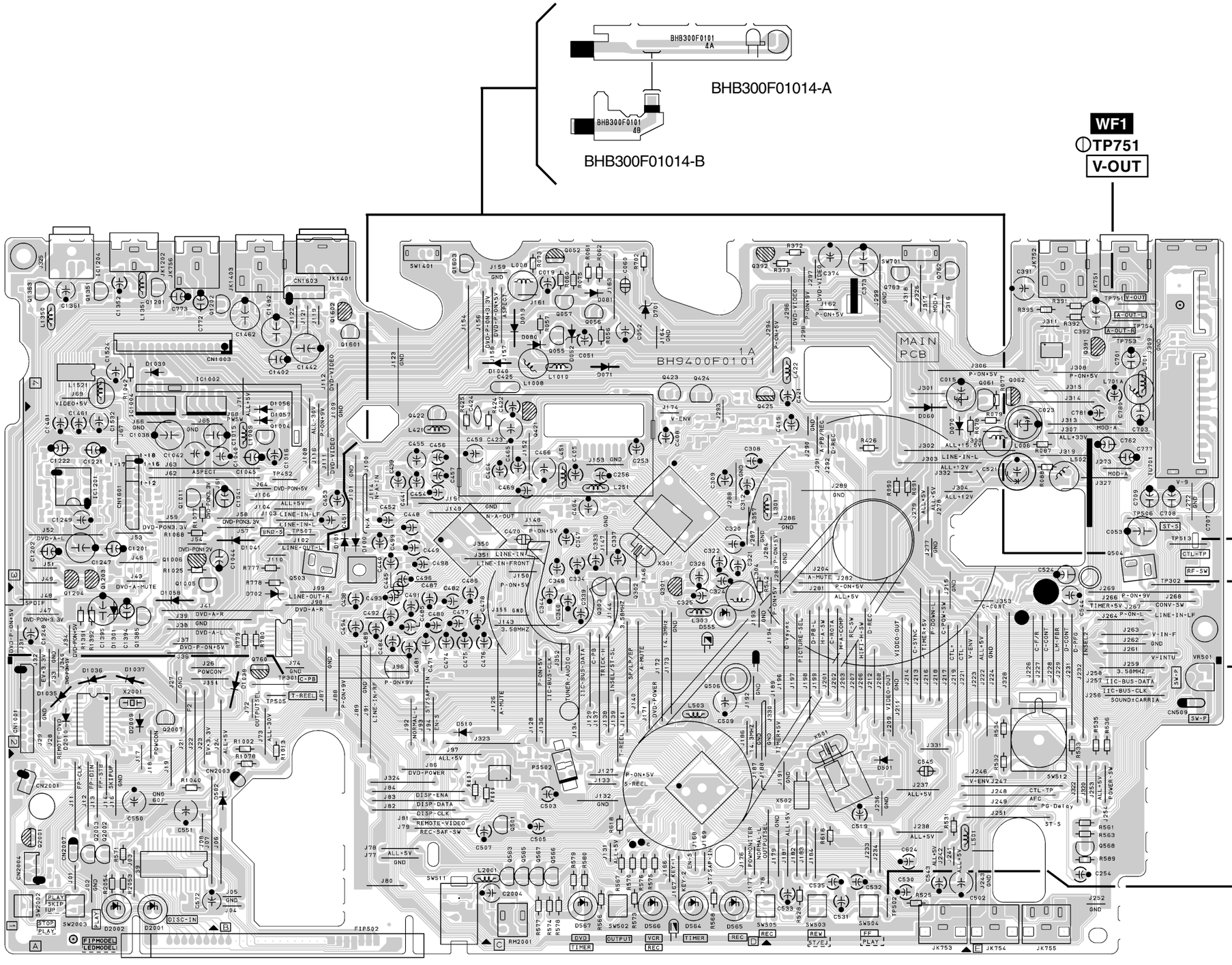
Function CBA Bottom View



BH9400F01011B

Main CBA Top View

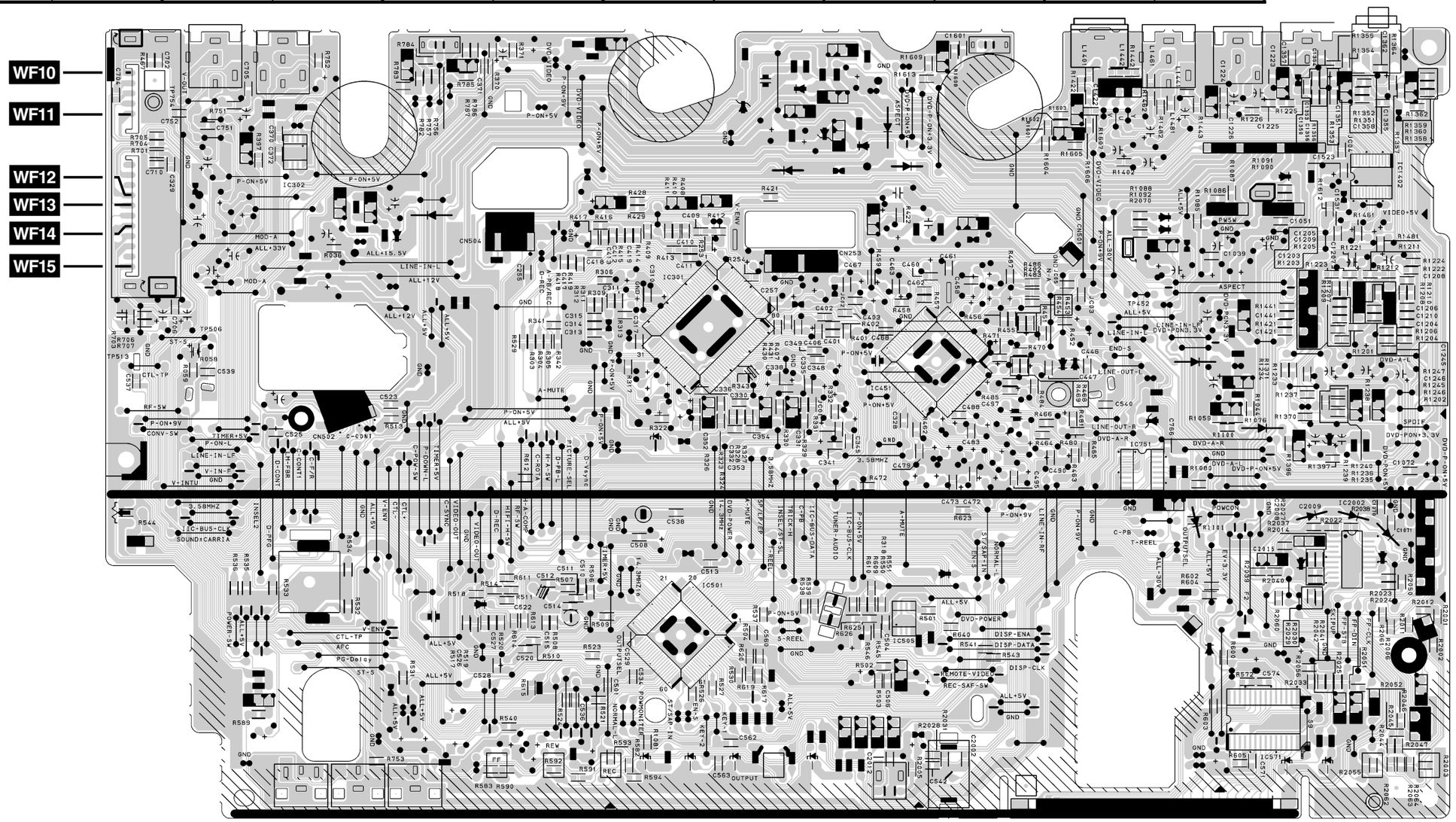
Sensor CBA Top View



Main CBA Bottom View

MAIN CBA Parts Location Guide

Ref No.	Position	Ref No.	Position	Ref No.	Position	Ref No.	Position	Ref No.	Position	Ref No.	Position	Ref No.	Position
ICS		COILS		COILS		TRANSISTORS		TRANSISTORS		TRANSISTORS		TEST POINTS	
IC301	C-3	L421	B-3	L1442	B-4	Q391	E-4	Q567	C-1	Q1385	A-2	TP302	E-3
IC451	C-3	L422	D-4	L1461	B-4	Q421	C-3	Q760	B-2	Q2001	A-1	TP452	B-3
IC501	C-2	L451	C-3	L1481	B-4	Q422	B-3	Q762	D-4	Q2002	A-1	TP502	D-1
IC571	A-1	L501	E-1	L1521	A-4	Q423	C-4	Q763	D-4	Q2003	A-1	TP505	B-2
IC751	B-2	L502	E-3	L2001	B-1	Q424	C-4	Q1004	B-3	CONNECTORS		TP506	E-3
IC1002	A-4	L503	C-2	TRANSISTORS		Q425	C-4	Q1005	A-3	CN1001	A-2	TP507	B-3
IC1004	A-3	L701	E-4	Q052	C-4	Q501	C-1	Q1006	A-3	CN1003	A-4	TP513	E-3
IC1201	A-3	L1009	B-3	Q055	C-4	Q503	B-3	Q1011	A-3	CN1601	A-3	TP751	E-4
IC1402	A-4	L1010	C-4	Q056	C-4	Q504	E-3	Q1201	A-4	CN2001	A-1	TP753	E-4
COILS		L1350	A-4	Q057	C-4	Q506	C-2	Q1202	B-4	VARIABLE RESISTORS		TP754	E-4
L251	C-3	L1351	A-4	Q301	C-2	Q563	C-1	Q1203	A-3	VR501	E-2		
L303	C-2	L1401	B-4	Q302	C-2	Q565	C-1	Q1204	A-2	TEST POINTS			
L304	C-3	L1441	B-4	Q303	C-2	Q566	C-1	Q1351	A-4	TP301	B-2		



Power Supply CBA Top View

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ATTENTION : POUR UNE PROTECTION CONTINUE LES RISQES
D'INCELE N'UTILISER QUE DES FUSIBLE DE MÊME TYPE.
RISK OF FIRE-REPLACE FUSE AS MARKED.

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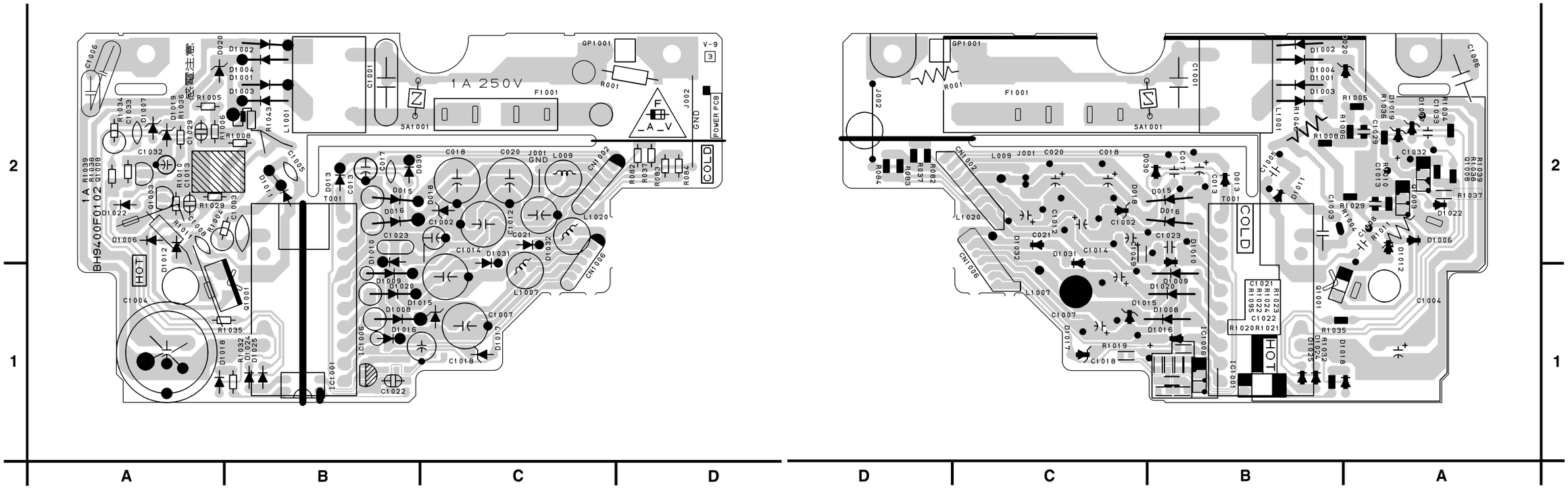
If Main Fuse (F1001) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

Power Supply CBA Bottom View

BECAUSE A HOT CHASSIS GROUND IS PRESENT IN THE POWER SUPPLY CIRCUIT , AN ISOLATION TRANSFORMER MUST BE USED. ALSO , IN ORDER TO HAVE THE ABILITY TO INCREASE THE INPUT SLOWLY , WHEN TROUBLESHOOTING THIS TYPE POWER SUPPLY CIRCUIT , A VARIABLE ISOLATION TRANSFORMER IS REQUIRED.

NOTE :
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



Power Supply CBA
Parts Location Guide

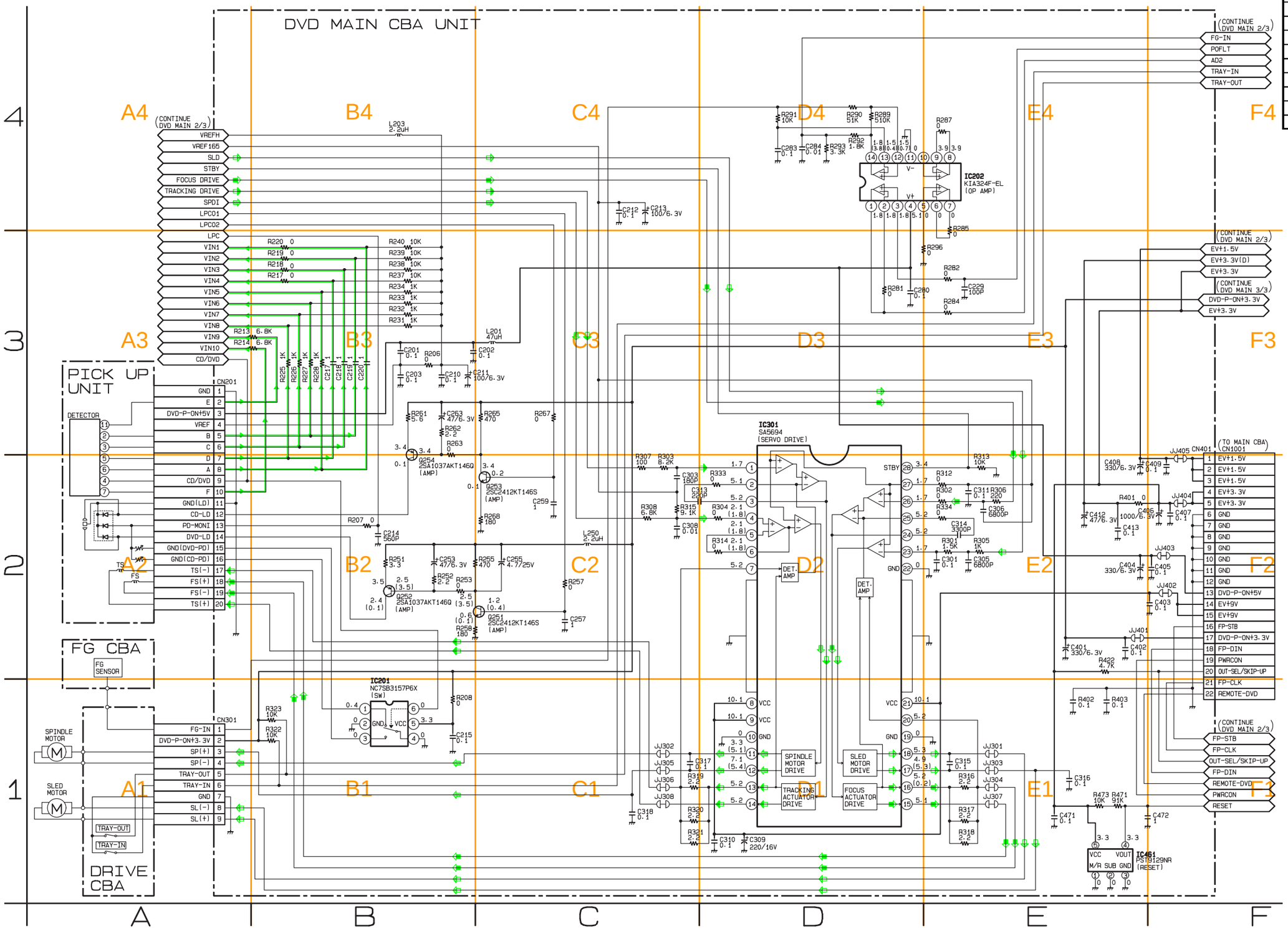
Ref No.	Position
ICS	
IC1001	B-1
IC1006	B-1
COILS	
L009	C-2
L1001	B-2
L1007	C-1
L1020	C-2
TRANSISTORS	
Q1001	B-1
Q1003	A-2
Q1008	A-2

DVD Main 1/3 Schematic Diagram < DVD Section >

DATA(VIDEO+AUDIO)　TRACKING SERVO SIGNAL　SLIDE SERVO SIGNAL
FOCUS SERVO SIGNAL　SPINDLE SERVO SIGNAL

DVD MAIN 1/3 Schematic Diagram
Parts Location Guide

Ref No.	Position
ICS	
IC201	B-1
IC202	E-4
IC301	D-3
IC461	E-1
TRANSISTORS	
Q251	C-2
Q252	B-2
Q253	C-2
Q254	B-2



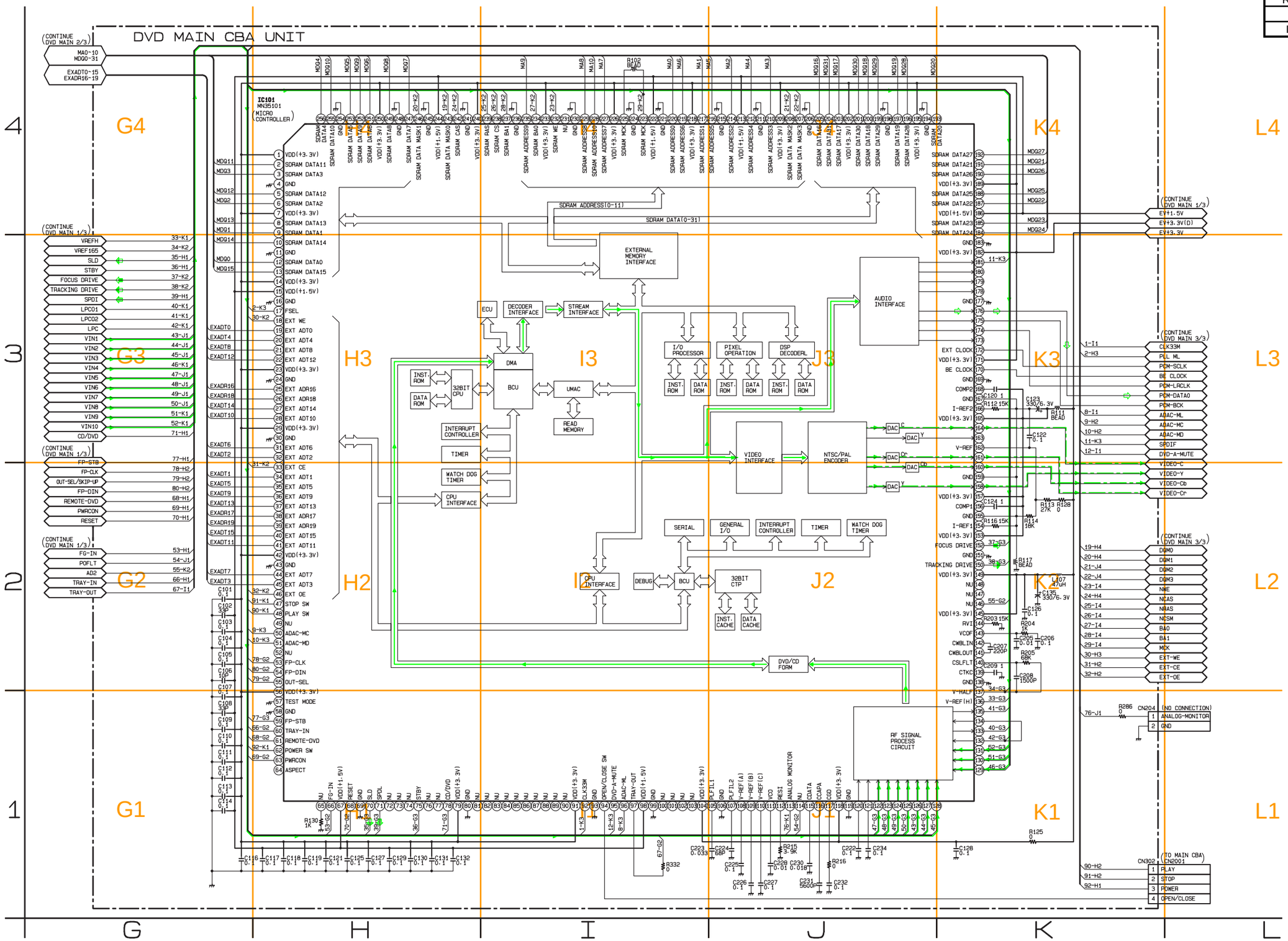
DVD Main 2/3 Schematic Diagram < DVD Section >

DATA(VIDEO+AUDIO)　TRACKING SERVO SIGNAL　SLIDE SERVO SIGNAL

FOCUS SERVO SIGNAL　SPINDLE SERVO SIGNAL

DVD MAIN 2/3 Schematic Diagram
Parts Location Guide

Ref No.	Position
ICS	
IC101	O-4



IC101 VOLTAGE CHART

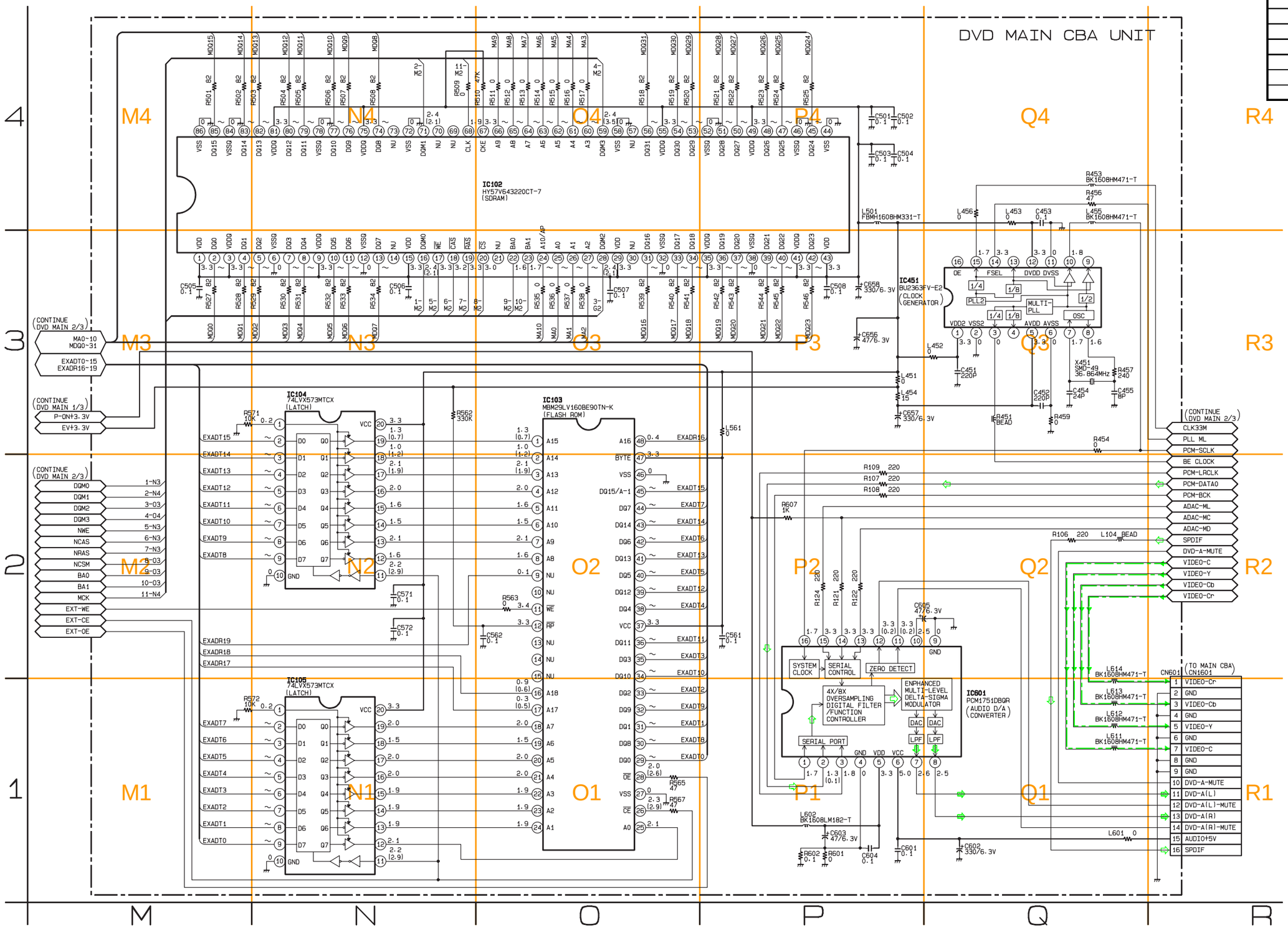
PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP	PIN.NO	PLAY	STOP
1	3.3	3.3	33	2.2	2.9	65	0.1	0.1	97	3.4	3.4	129	2.0	2.0	161	0.5	0.5	193	~	~	225	1.9	1.9
2	~	~	34	~	~	66	1.2	2.5	98	1.6	1.6	130	2.2	2.2	162	1.4	1.4	194	0	0	226	3.3	3.3
3	~	~	35	~	~	67	1.6	1.6	99	0	0	131	2.3	2.3	163	-----	-----	195	3.3	3.3	227	~	~
4	0	0	36	~	~	68	3.4	3.4	100	-----	-----	132	0.4	0.1	164	0.9	0.9	196	~	~	228	~	~
5	~	~	37	~	~	69	0	0	101	-----	-----	133	1.2	0.4	165	3.3	3.3	197	~	~	229	~	~
6	~	~	38	0.3	0.5	70	1.7	1.7	102	-----	-----	134	0.4	0.1	166	1.5	1.5	198	0	0	230	0	0
7	3.3	3.3	39	0.1	0.1	71	2.4	1.7	103	-----	-----	135	0.2	0.2	167	0	0	199	~	~	231	-----	-----
8	~	~	40	~	~	72	-----	-----	104	3.3	3.3	136	2.3	2.3	168	2.1	2.1	200	~	~	232	3.3	3.3
9	~	~	41	~	~	73	-----	-----	105	0.9	0.9	137	1.7	1.7	169	0	0	201	~	~	233	3.3	3.3
10	~	~	42	3.3	3.3	74	-----	-----	106	0	0	138	0	0	170	0.8	0.8	202	3.3	3.3	234	1.6	1.6
11	0	0	43	0	0	75	3.4	3.4	107	0.8	0.8	139	1.7	1.7	171	3.3	3.3	203	~	~	235	~	~
12	~	~	44	~	~	76	-----	-----	108	1.6	1.6	140	1.7	1.7	172	1.6	1.6	204	~	~	236	0	0
13	~	~	45	~	~	77	-----	-----	109	2.1	2.1	141	1.7	1.7	173	-----	-----	205	~	~	237	1.7	1.7
14	3.3	3.3	46	2.0	2.6	78	0.1	0.1	110	2.6	2.6	142	1.7	1.7	174	1.8	1.8	206	0	0	238	3.0	3.0
15	1.5	1.5	47	3.3	3.4	79	3.3	3.3	111	2.0	2.0	143	0.5	0.5	175	1.7	1.7	207	2.4	3.5	239	3.3	3.3
16	0	0	48	3.2	3.4	80	0	0	112	0.7	0.9	144	1.6	1.6	176	1.4	0.1	208	2.4	2.1	240	3.3	3.3
17	3.4	3.4	49	-----	-----	81	-----	-----	113	2.1	2.1	145	3.3	3.3	177	0	0	209	3.3	3.3	241	0	0
18	3.4	3.4	50	3.4	3.4	82	-----	-----	114	1.8	1.8	146	1.8	1.8	178	-----	-----	210	~	~	242	3.2	3.2
19	~	~	51	3.4	3.4	83	-----	-----	115	1.4	1.4	147	-----	-----	179	-----	-----	211	0	0	243	2.4	2.1
20	~	~	52	-----	-----	84	-----	-----	116	0.3	0.3	148	-----	-----	180	-----	-----	212	~	~	244	1.5	1.5
21	~	~	53	3.4	3.4	85	-----	-----	117	1.6	1.6	149	3.3	3.3	181	1.7	1.7	213	1.5	1.5	245	0	0
22	~	~	54	3.4	3.4	86	-----	-----	118	3.3	3.3	150	1.7	1.7	182	3.3	3.3	214	~	~	246	2.4	2.1
23	3.3	3.3	55	3.3	3.3	87	-----	-----	119	0	0	151	0	0	183	0	0	215	0	0	247	~	~
24	0	0	56	3.3	3.3	88	-----	-----	120	1.9	1.9	152	1.7	1.7	184	~	~	216	~	~	248	0	0
25	0.4	0.4	57	0	0	89	-----	-----	121	1.9	1.9	153	3.3	3.3	185	~	~	217	~	~	249	~	~
26	0.9	0.6	58	0	0	90	-----	-----	122	2.4	2.4	154	1.4	1.4	186	1.5	1.5	218	3.3	3.3	250	3.3	3.3
27	~	~	59	3.3	3.3	91	3.3	3.3	123	2.4	2.4	155	0	0	187	~	~	219	~	~	251	~	~
28	~	~	60	3.4	3.4	92	1.7	1.5	124	2.4	2.4	156	2.2	2.2	188	~	~	220	~	~	252	~	~
29	3.3	3.3	61	3.1	3.1	93	0	0	125	2.4	2.4	157	3.3	3.3	189	3.3	3.3	221	0	0	253	~	~
30	0	0	62	3.2	3.4	94	-----	-----	126	2.0	2.0	158	0.7	0.7	190	~	~	222	1.5	1.5	254	0	0
31	~	~	63	3.4	3.4	95	3.4	0.1	127	2.0	2.0	159	0	0	191	~	~	223	1.9	1.9	255	~	~
32	~	~	64	-----	-----	96	3.4	3.4	128	2.0	2.0	160	0.5	0.5	192	~	~	224	0	0	256	~	~

DVD Main 3/3 Schematic Diagram < DVD Section >

VIDEO SIGNAL　SPINDLE SERVO SIGNAL　DATA(AUDIO)

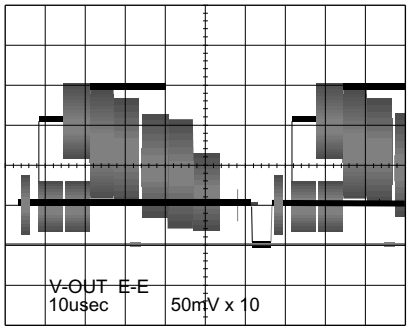
DVD MAIN 3/3 Schematic Diagram
Parts Location Guide

Ref No.	Position
ICS	
IC102	O-4
IC103	O-3
IC104	N-3
IC105	N-1
IC451	P-3
IC601	Q-1



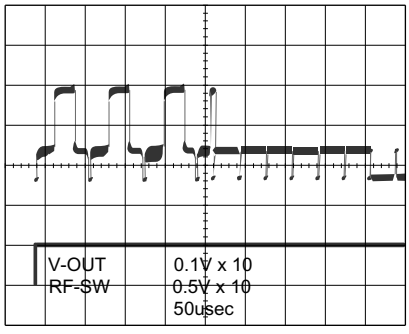
WAVEFORMS

WF 1 (TP751 of Main CBA)



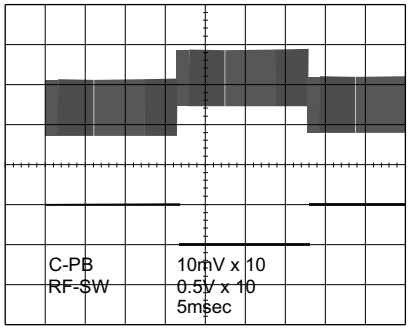
WF1 UPPER (TP751 of Main CBA)

WF2 LOWER (TP302 of Main CBA)

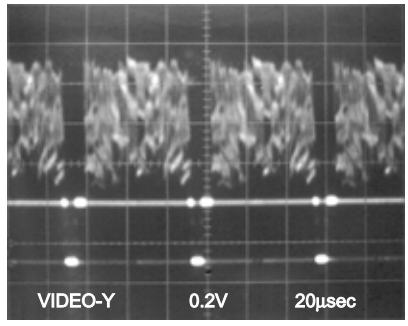


WF3 UPPER (TP301 of Main CBA)

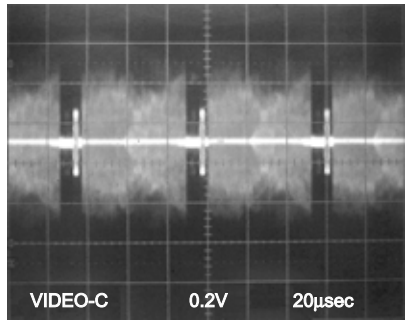
WF2 LOWER (TP302 of Main CBA)



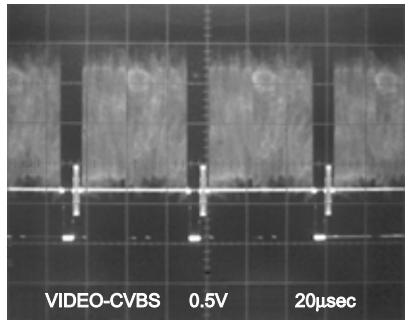
WF4 Pin 5 of CN1601



WF5 Pin 7 of CN1601

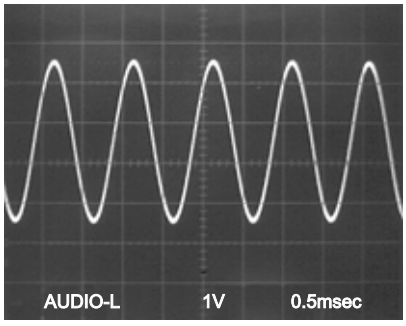


WF6 Pin 21 of IC1402

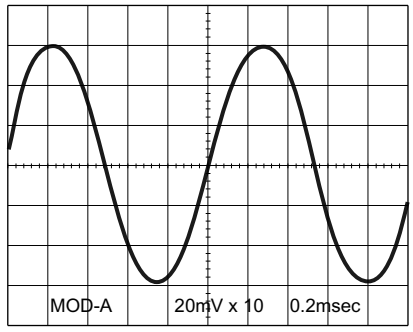


WAVEFORMS

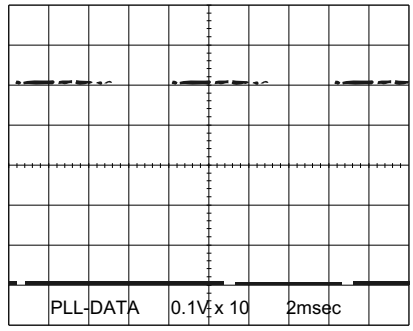
WF7 Pin 11 of CN1601



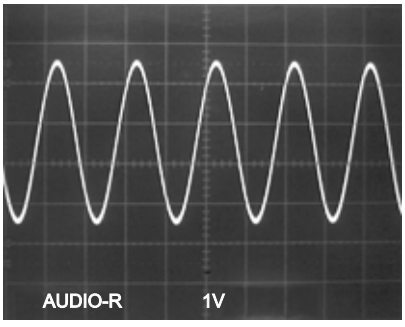
WF10 (Pin 2 of TU701)



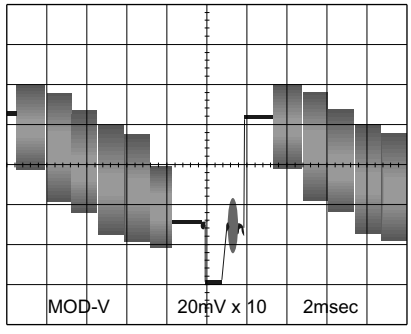
WF13 (Pin 12 of TU701)



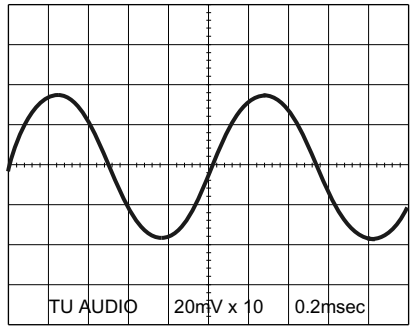
WF8 Pin 13 of CN1601



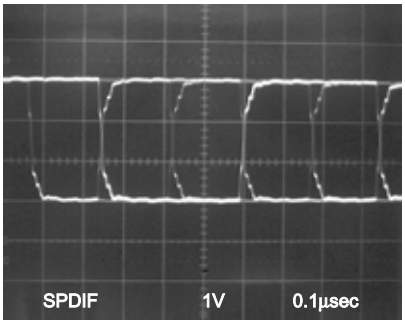
WF11 (Pin 6 of TU701)



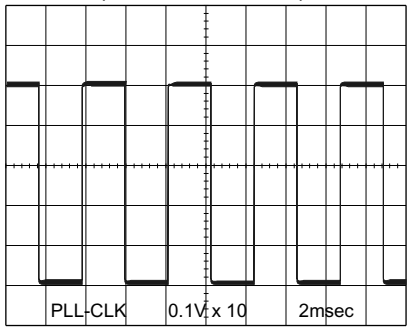
WF14 (Pin 14 of TU701)



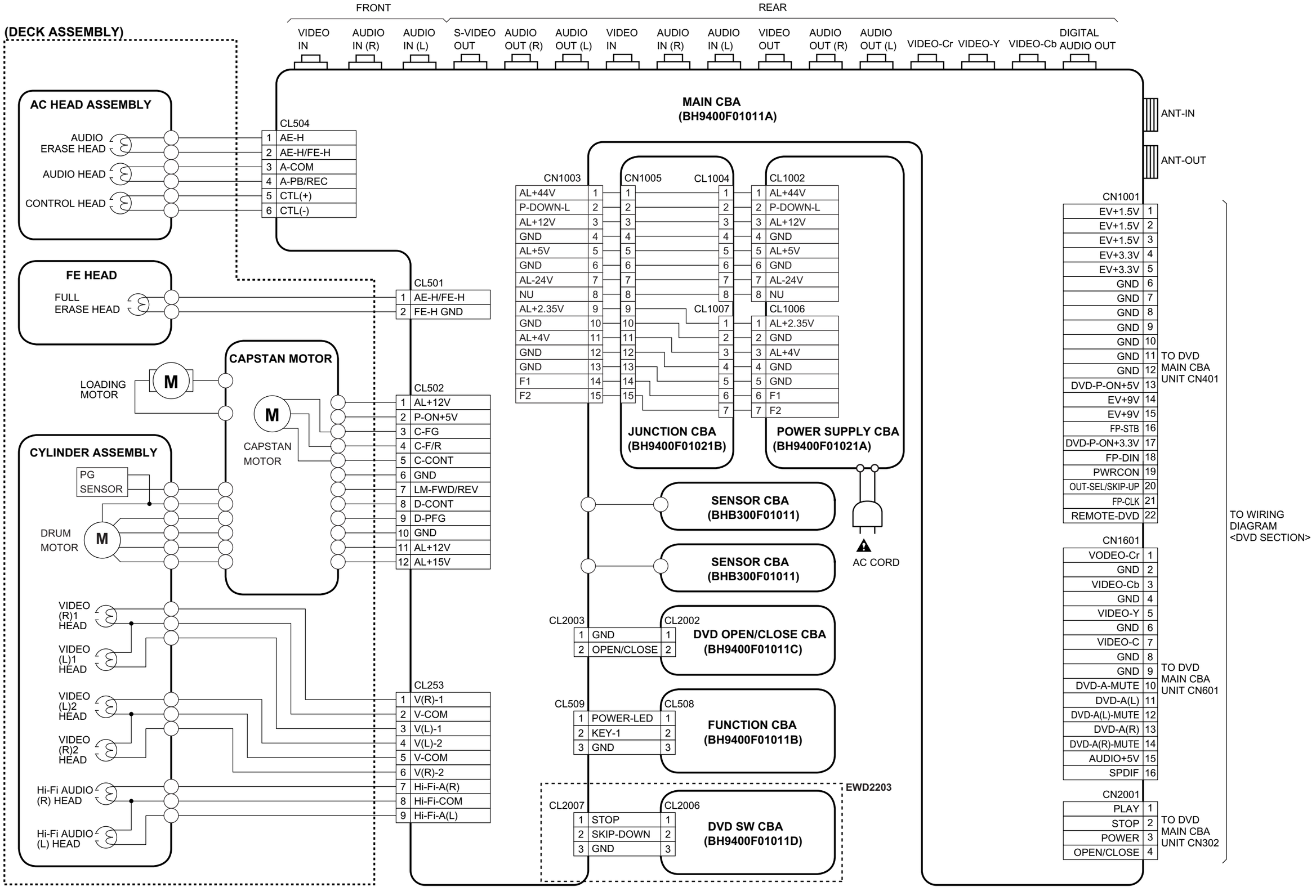
WF9 Pin 16 of CN1601



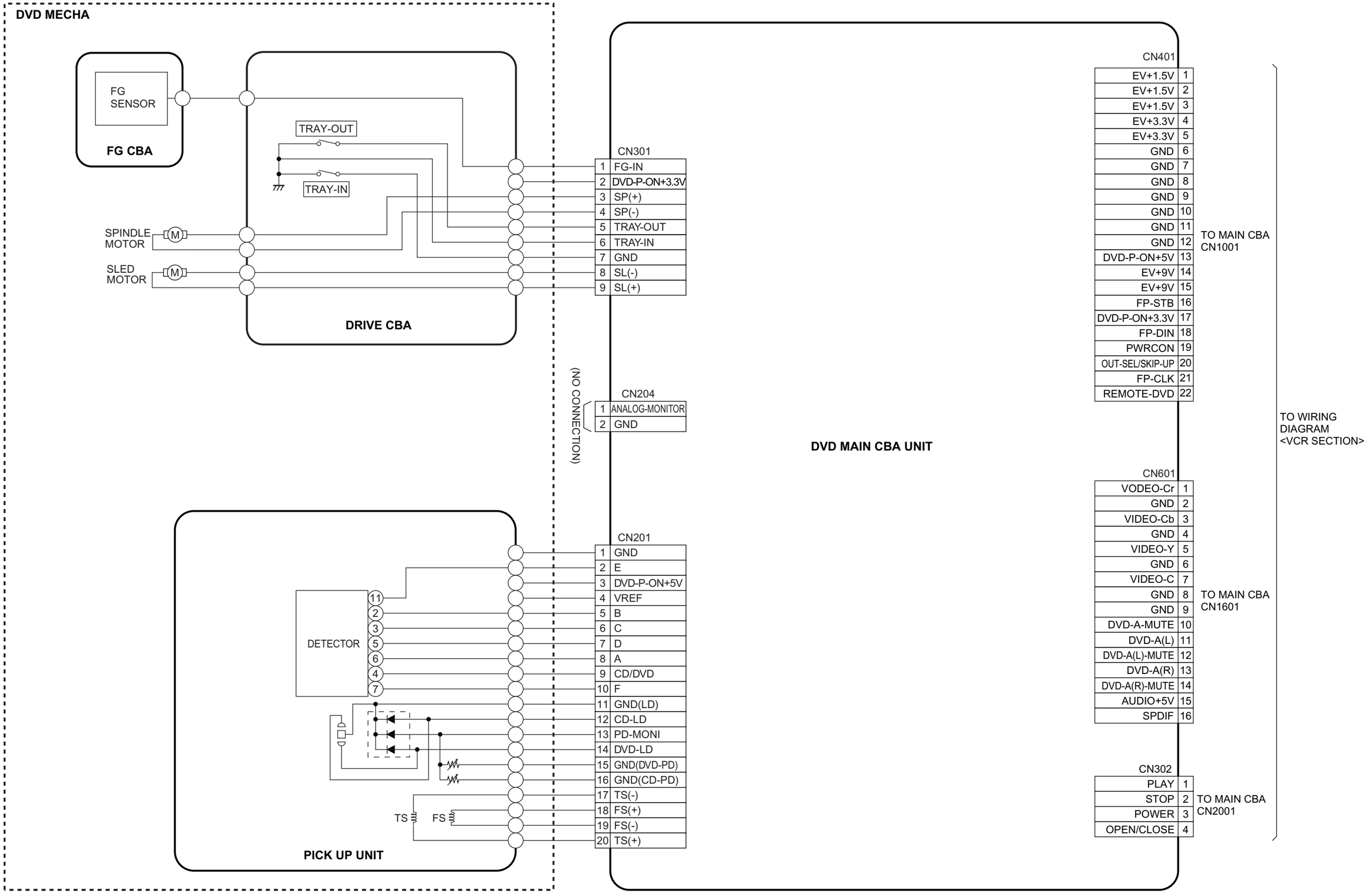
WF12 (Pin 11 of TU701)



WIRING DIAGRAM < VCR SECTION >



WIRING DIAGRAM < DVD SECTION >



SYSTEM CONTROL TIMING CHARTS

[VCR Section]

Mode SW : LD-SW

LD-SW Position detection A/D Input voltage Limit (Calculated voltage)	Symbol
3.76V~4.50V (4.12V)	EJ
4.51V~5.00V (5.00V)	CL
0.00V~0.25V (0.00V)	SB
1.06V~1.50V (1.21V)	TL
0.66V~1.05V (0.91V)	FB
1.99V~2.60V (2.17V)	SF
1.51V~1.98V (1.80V)	SM
3.20V~3.75V (3.40V)	AU
0.26V~0.65V (0.44V)	AL
4.51V~5.00V (5.00V)	SS
2.61V~3.19V (2.97V)	RS

Note:

Note:

EJ → RS: Loading FWD (LM-FWD/REV “H”)
RS → EJ: Loading REV (LM-FWD/REV “L”)
Stop (A) = Loading
Stop (B) = Unloading

Note:

Symbol	Loading Status
EJ	Eject
CL	Eject ~ REW Reel
SB	REW Reel ~ Stop(B)
TL	Stop(B) ~ Brake Cancel
FB	Brake Cancel ~ FF / REW
SF	FF / REW ~ Stop(M), (FF / REW)
SM	Stop(M), (FF / REW) ~ Stop(A)
AU	Stop(A) ~ Play / REC
AL	Play / REC ~ Still / Slow
SS	Still / Slow ~ RS (REW Search)
RS	RS (REW Search)

Still/Slow Control
Frame Advance Timing Chart

1) SP Mode

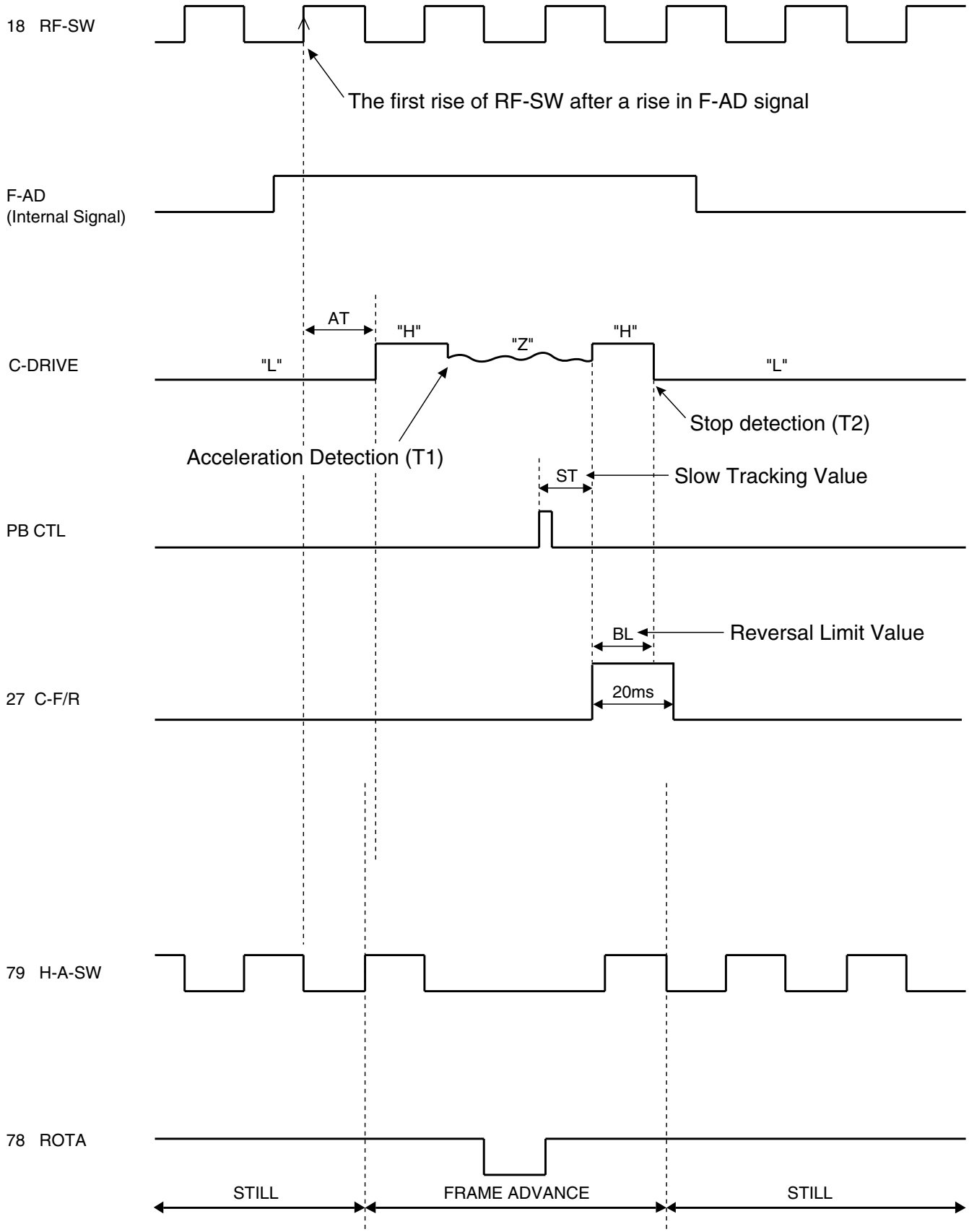


Fig. 1

2) LP/SLP Mode

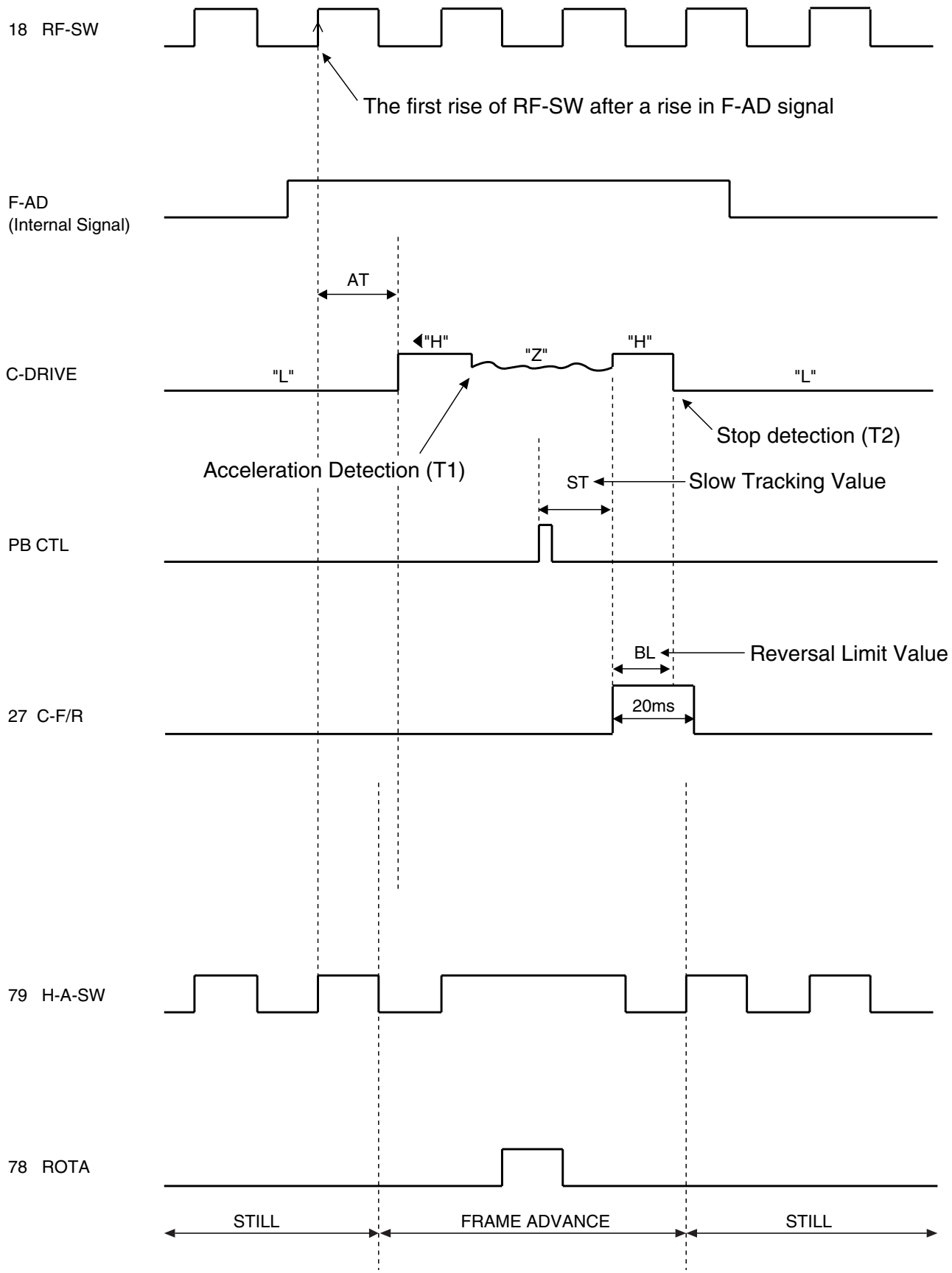


Fig. 2

1. EJECT (POWER OFF) -> CASSETTE IN (POWER ON) -> STOP(B) -> STOP(A) -> PLAY -> RS -> FS -> PLAY -> STILL -> PLAY -> STOP(A)

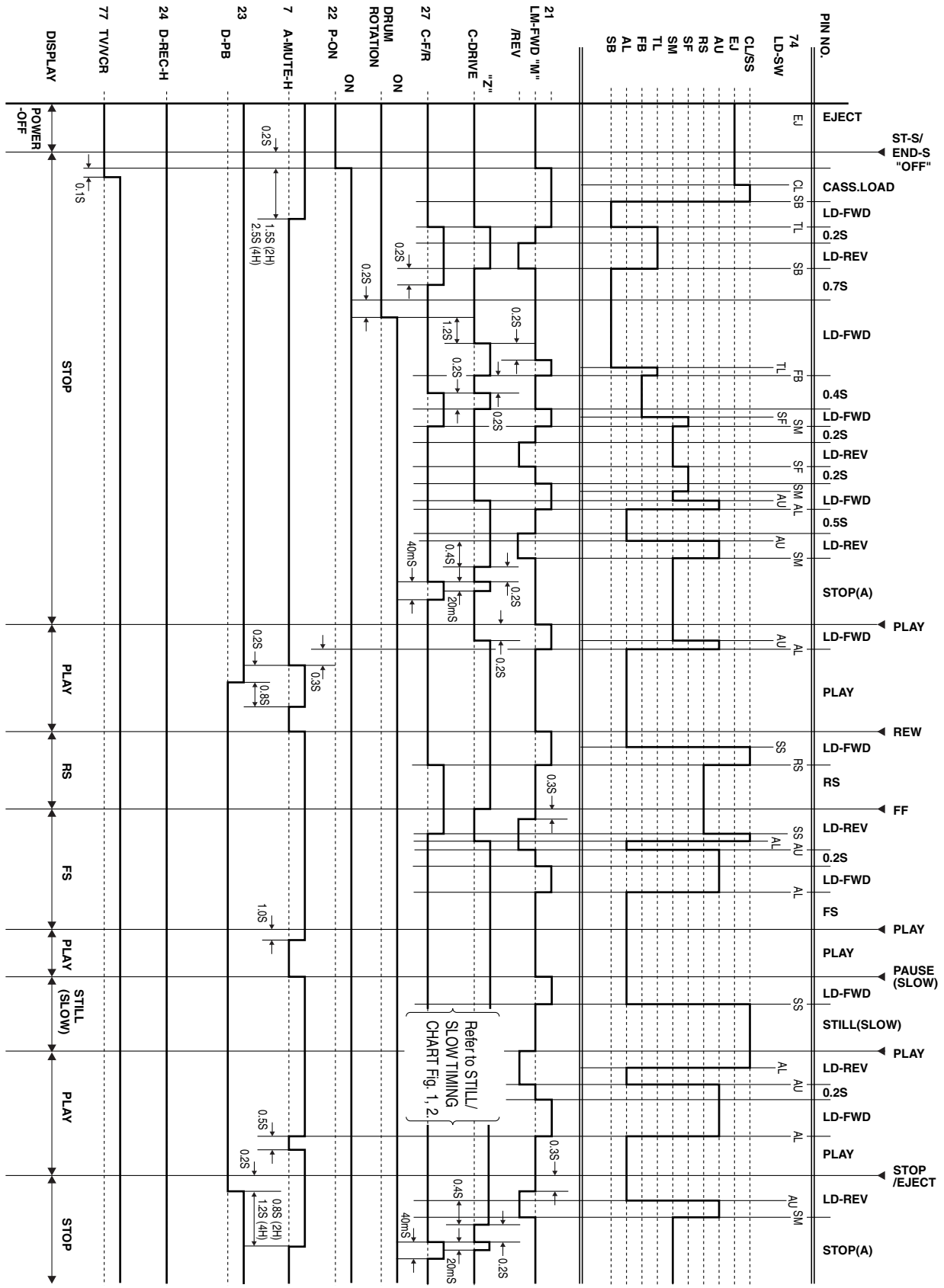


Fig. 3

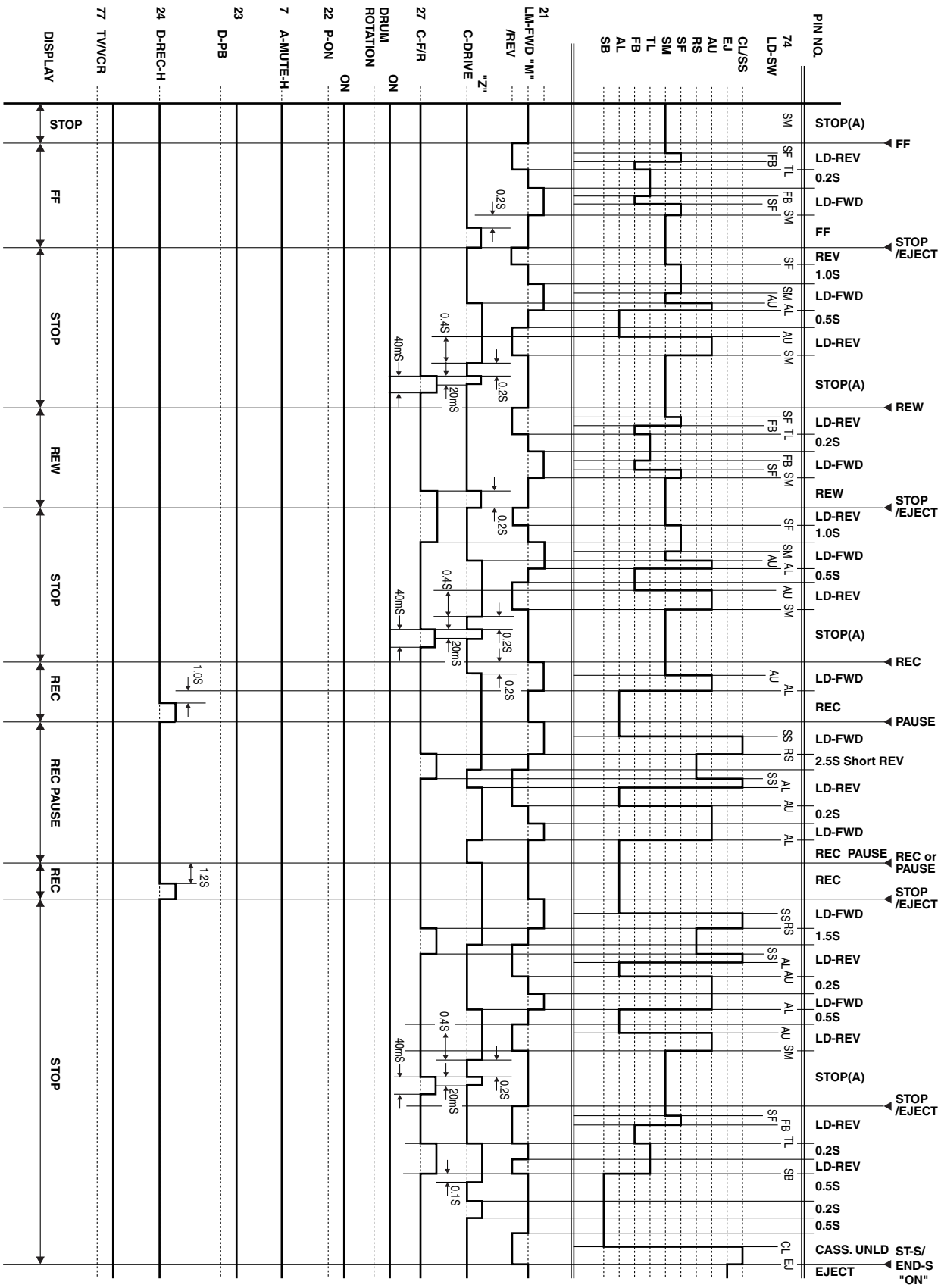
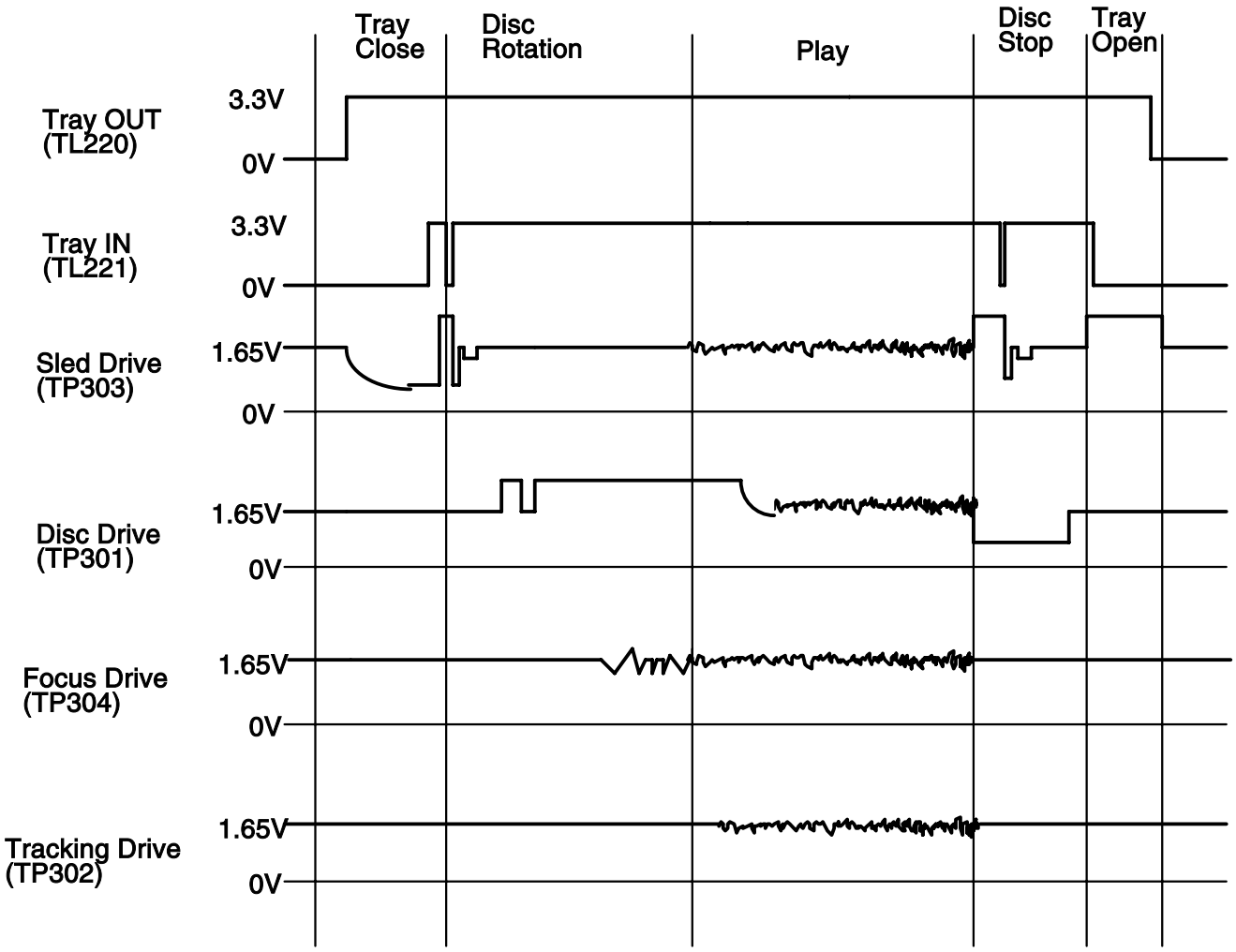

2. STOP(A) -> FF -> STOP(A) -> REW -> STOP(A) -> REC -> PAUSE -> PAUSE or REC -> STOP(A) -> EJECT
PIN NO.
74 LD-SW
CL/SS
EJ
AU
RS
SF
SM
TL
FB
AL
SB
21 LM-FWD "M" /REV
"Z" C-DRIVE
27 C-F/R
DRUM ROTATION ON
22 P-ON ON
7 A-MUTE-H
23 D-PB
24 D-REC-H
77 TV/VCR
DISPLAY
STOP
FF
STOP
REW
STOP
REC
REC PAUSE
REC
STOP
STOP(A)
FF
LD-REV
0.2S
LD-FWD
FF
STOP /EJECT
REV
1.0S
LD-FWD
0.5S
LD-REV
STOP(A)
REW
LD-REV
0.2S
LD-FWD
REW
STOP /EJECT
LD-REV
1.0S
LD-FWD
0.5S
LD-REV
STOP(A)
REC
LD-FWD
REC
PAUSE
LD-FWD
2.5S Short REV
LD-REV
0.2S
LD-FWD
REC PAUSE
REC or PAUSE
REC
STOP /EJECT
LD-FWD
1.5S
LD-REV
0.2S
LD-FWD
0.5S
LD-REV
STOP(A)
STOP /EJECT
LD-REV
0.2S
LD-REV
0.5S
0.2S
0.5S
CASS. UNLD
EJECT
ST-S/ END-S "ON"
0.2S
0.4S
40mS
20mS
1.0S
1.2S
0.1S

Fig. 4

[DVD Section]

Tray Close ~ Play / Play ~ Tray Open



IC PIN FUNCTION DESCRIPTIONS

[VCR Section]

Comparison Chart of Models and Marks

Model	Mark
DVC860D	A
EWD2203	B

IC501(SERVO / SYSTEM CONTROL IC)

"H" ≥ 4.5V, "L" ≤ 1.0V

Pins that have * in the Pin No. section on table below are not used.

Pin No.	Mark	IN/ OUT	Signal Name	Function	Active Level
1		IN	P-DOWN -L	Power Voltage Down Detector Signal	L
2		IN	REC-SAF-SW	Recording Safety SW Detect (With Record tab = "L"/ With out Record tab = "H")	H/L
3		IN	T-REEL	Take Up Reel Rotation Signal	PULSE
4		-	N.U.	Not Used	-
5		IN	REMO-CON-IN	Remote Control Sensor	L
6		OUT	DISPLAY-CLK	7seg. Driver IC Clock Control Output Signal	H/L
7		OUT	A-MUTE-H	Audio Mute Control Signal (Mute = "H")	H
8		OUT	DISPLAY-DATA	7seg. Driver IC Data Control Output Signal	H/L
9		OUT	DISPLAY-ENA	7seg. Driver IC Enable Control Output Signal	L
10		-	N.U.	Not Used	-
11		OUT	TRICK-H	Special Playback= "H"	H/Z/L
12		IN/ OUT	IIC-BUS-SDA	IIC BUS Control Data	H/L
13		OUT	IIC-BUS-SCL	IIC BUS Control Clock	H/L
14		OUT	SP/LP/ SLP	Top Speed Select Signal (SP="L"/ LP="Z"/ SLP="H")	H/Z/L
15		-	N.U.	Not Used	-
16		OUT	INSEL/ ST-SL	Input Selector Control Signal (EE/Rec)/Still/ Slow (Playback)	H/Hi-z /L
17		-	N.U.	Not Used	-
18		OUT	RF-SW	Video Head Switching Pulse	H/L
19		OUT	D-V SYNC	Dummy V-sync Output	H/Hi-z
20		IN	RESET	System Reset Signal (Reset="L")	L
21		OUT	LM-FWD/ REV	Loading Motor FWD/ REV Output	H/Z/L
22		OUT	P-ON-L	Power On Signal to Low	L
23		OUT	D-PB-L	Playback Instruction Signal	L
24		OUT	D-REC-H	Delayed Record Signal	H
25	B	-	N.U.	Not Used	-
	A	OUT	HiFi-H-SW	HiFi Audio Head Switching Pulse	H/L
26		OUT	DVD-POWER	DVD Power Control Signal	H
27		OUT	C-F/R	Capstan Motor FWD/REV Control Signal (FWD="L"/ REV="H")	H/L
28		OUT	C-CONT	Capstan Motor Control Signal	PWM
29		OUT	D-CONT	Drum Motor Control Signal	PWM
30		-	N.U.	Not Used	-
31		-	VDD	VDD	-

Pin No.	Mark	IN/ OUT	Signal Name	Function	Active Level
32		OUT	OSCO	Main Clock Output 14.31818MHz	-
33		IN	OSCI	Main Clock Input 14.31818MHz	-
34		-	VSS	VSS	
35		IN	XI	Sub Clock Input 32.768 MHz	-
36		OUT	XO	Sub Clock Output 32.768 MHz	-
37		IN	SXI	Operation Mode Select-ing Input Sig-nal	-
38		OUT	VIDEO-OUT	Composite Video Signal Output	-
39		-	Vss2	Vss2	-
40		IN	VIDEO-IN	Composite Video Signal Input	
41		IN	C-SYNC	Composite Synchronized Pulse	PULSE
42		-	VDD2	VDD2	-
43		IN	AFCC	Low Path Filter Input Signal For AFC	-
44		OUT	AFCLPF	Low Path Filter Output Signal For AFC	-
45		-	N.U.	Not Used	-
46		OUT	OUTPUT-SELECT	Output Select	H/L
47		IN	D-PFG	Drum PG/FG Input Signal	PULSE
48		-	N.U.	Not Used	-
49		IN	C-FG	Capstan Motor Rotation Detection Pulse	PULSE
50		-	AFG	GND	-
51		OUT	VRO	Servo Stan-dard Voltage Output	-
52		IN	VRI	Servo Stan-dard Voltage Input	-
53		-	AVss	AVSS	-

Pin No.	Mark	IN/ OUT	Signal Name	Function	Active Level
54		IN	CTLA	CTL Amp. AC GND	-
55		-	AVDD	AVDD	-
56		IN/ OUT	CTL (+)	Playback/ Record Control Signal (+)	-
57		IN/ OUT	CTL (-)	Playback/ Record Control Signal (-)	-
58		OUT	CTL	Amp. Output Control Signal for Test Point	-
59	B	-	N.U.	Not Used	-
	A	IN	HiFi/ NOR-IN	Audio Mode Input HiFi=”L”/ Normal=”H”	A/D
60		IN	POW-MONITO R	DVD Power Monitor Signal (P-off="L", P-on="H")	H/L
61	B	-	N.U.	Not Used	-
	A	IN	ST/SAP-IN	Tuner Stereo/ Sap Detector Signal Input	A/D
62		IN	END-S	Tape End Position Detect Signal	A/D
63		IN	AFC	Automatic Frequency Control Signal	A/D
64		IN	V-ENV	Video Envelope Comparator Signal	A/D
65		IN	PG-DELAY	Video Head Switching Pulse Signal Adjusted Voltage	A/D
66		IN	KEY-2	A/D Key Data Signal 2	A/D
67		IN	KEY-1	A/D Key Data Signal 1	A/D
68		IN	LD-SW	Deck Mode Position Detector Signal	A/D
69		IN	ST-S	Tape Start Position Detector Signal	A/D
70		OUT	REC-IND	VCR Mode LED Signal Output	H/L

Pin No.	Mark	IN/ OUT	Signal Name	Function	Active Level
71		OUT	REC-IND	DVD Mode LED Signal Output	H/L
72		OUT	VCR/TV-IND	REC Mode LED Signal Output	L
73		-	N.U.	Not Used	-
74		-	N.U.	Not Used	-
75		OUT	TIMER-IND	“TIMER” LED Signal Output	H/L
76		OUT	CONV-SW	RF Conv. Output Channel Switching Signal 3ch=”Hi-z”, 4ch=”L”	Hi-z/L
77		OUT	VCR/TV	RF Conv. ON/ OFF Signal (TV="L"/ VCR="H")	H/L
78		OUT	C-ROTA	Color Phase Rotary Changeover SIgnal	H/L
79		OUT	H-A-SW	Video Head Amp Switching Pulse	H/L
80		IN	H-A-COMP	Head Amp Comparator Signal	H/L

Notes:

Abbreviation for Active Level:

PWM -----Pulse Wide Modulation

A/D--------Analog - Digital Converter

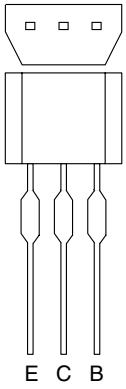
[DVD Section]

DVC860D

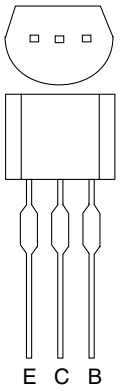
IC571 [PT6313-S-TP]

Pin No.	In/Out	Signal Name	Name Function
1	In	CLK	Clock Input
2	In	STB	Serial Interface Strobe
3	In	K1	Key Data 1 Input
4	In	K2	Key Data 2 Input
5	-	VSS	GND
6	-	VDD	Power Supply
7	Out	a / KEY-1	Segment Output / Key Souce-1
8	Out	b / Key-2	Segment Output / Key Souce-2
9	Out	c / Key-3	Segment Output / Key Souce-3
10	Out	d / Key-4	Segment Output/ Key Souce-4
11	Out	e	Segment Output
12	In	f	
13	In	g	
14	Out	h	
15	-	VEE	Pull Down Level
16	Out	i	Segment Output
17	Out	7G	Grid Output
18		6G	
19		5G	
20		4G	
21		3G	
22		2G	
23		1G	
24	-	VDD	Power Supply
25	-	VSS	GND
26	In	OSC	Oscillator Input
27	Out	DOUT	Serial Data Output
28	In	DIN	Serial Data Input

LEAD IDENTIFICATIONS

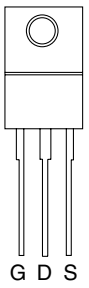


BN1L3Z(P)
BA1L3Z-T
BN1F4M-T
BA1F4M-T
KTA1266(GR)
KTC3193(Y)
KTC3199(Y,GR,BL)
2SC2785(J,H,F,K)
KRC103M
KRA103M
KTA1273(Y)
KRA110M
KRC110M-AT



KTC3202(Y)
2SC1815-BL(TPE2)
2SC1815-Y(TPE2)
2SC1815-GR(TPE2)
2SC3331(T,U)
2SC2120-Y(TPE2)
KTC3203(Y)
KTC3205 (Y)
2SA1015-GR(TPE2)
KTC3198(Y,GR)
2SA966(Y)
2SC2236-Y-TPE6, C

2SK2662
KIA78R33PI
PQ3RD13(1A)



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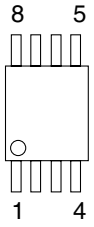
KIA4558P



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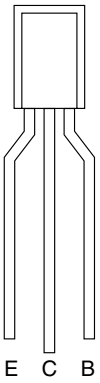

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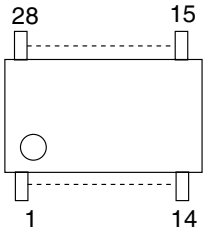

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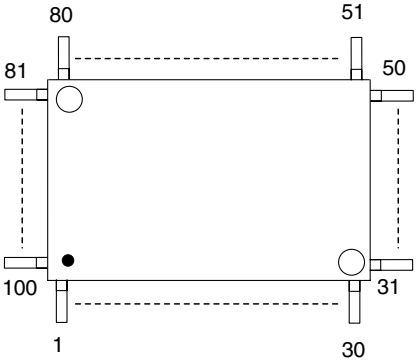
LA71091M



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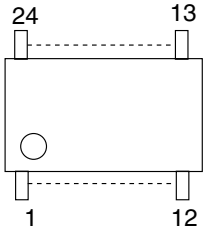

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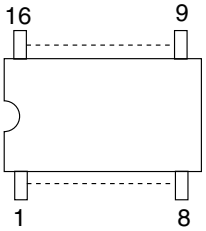

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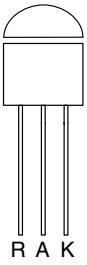
TL431-TA



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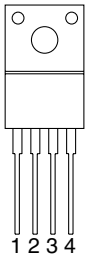

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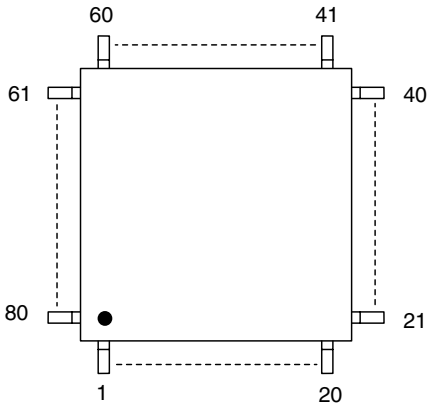

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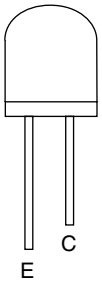


Note:
A: Anode
K: Cathode
E: Emitter
C: Collector
B: Base
R: Reference
S: Source
G: Gate
D: Drain

DECK MECHANISM SECTION

DVD PLAYER & VIDEO CASSETTE RECORDER

DVC860D/EWD2203

Sec. 2: Deck Mechanism Section

- **Standard Maintenance**
- **Alignment for Mechanism**
- **Disassembly/Assembly of Mechanism**
- **Alignment Procedures of Mechanism**

TABLE OF CONTENTS

Standard Maintenance 2-1-1
Service Fixtures and Tools 2-2-1
Mechanical Alignment Procedures 2-3-1
Disassembly / Assembly Procedures of Deck Mechanism 2-4-1
Alignment Procedures of Mechanism 2-4-9

STANDARD MAINTENANCE

Service Schedule of Components

H: Hours ❍ : Check ●: Change

Deck		Periodic Service Schedule			
Ref.No.	**Part Name**	**1,000 H**	**2,000 H**	**3,000 H**	**4,000 H**
B2	Cylinder Assembly	❍	●	❍	●
B3	Loading Motor Assembly			●	
B8	Pulley Assembly		●		●
B587	Tension Lever Assembly		●		●
B31	AC Head Assembly			●	
B573,B574	Reel (SP)(D2), Reel (TU)(D2)			●	
B37	Capstan Motor		●		●
B52	Cap Belt		●		●
*B73	FE Head			●	
B133,B134	Idler Gear, Idler Arm		●		●
B410	Pinch Arm Assembly		●		●
B414	M Brake (SP) Assembly		●		●
B416	M Brake (TU) Assembly		●		●
B525	LDG Belt		●		●
B569 (2 head only)	Cam Holder (F)		●		●
B593 (4 head, 4 head HiFi only)	Cam Holder (F) Assembly		●		●

Notes:

1. Clean all parts for the tape transport (Upper Drum with Video Head / Pinch Roller / Audio Control Head / Full Erase Head) using 90% Isopropyl Alcohol.
2. After cleaning the parts, do all DECK ADJUSTMENTS.
3. For the reference numbers listed above, refer to Deck Exploded Views.

* B73 ------ Recording Model only

Cleaning

Cleaning of Video Head

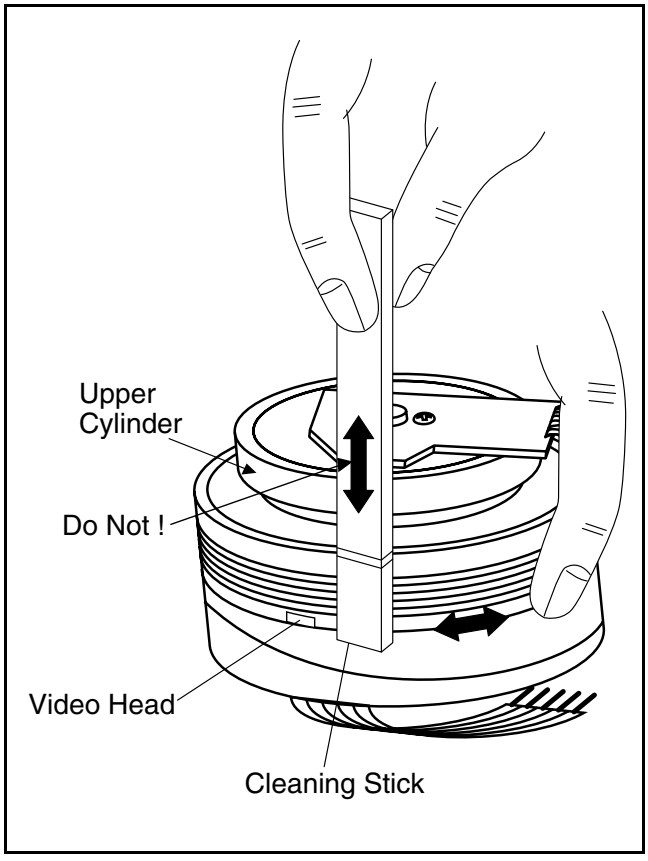
Clean the head with a head cleaning stick or chamois cloth.

Procedure

1. Remove the top cabinet.
2. Put on a glove (thin type) to avoid touching the upper and lower drum with your bare hand.
3. Put a few drops of 90% Isopropyl alcohol on the head cleaning stick or on the chamois cloth and, by slightly pressing it against the head tip, turn the upper drum to the right and to the left.

Notes:

1. The video head surface is made of very hard material, but since it is very thin, avoid cleaning it vertically.
2. Wait for the cleaned part to dry thoroughly before operating the unit.
3. Do not reuse a stained head cleaning stick or a stained chamois cloth.



Cleaning of Audio Control Head

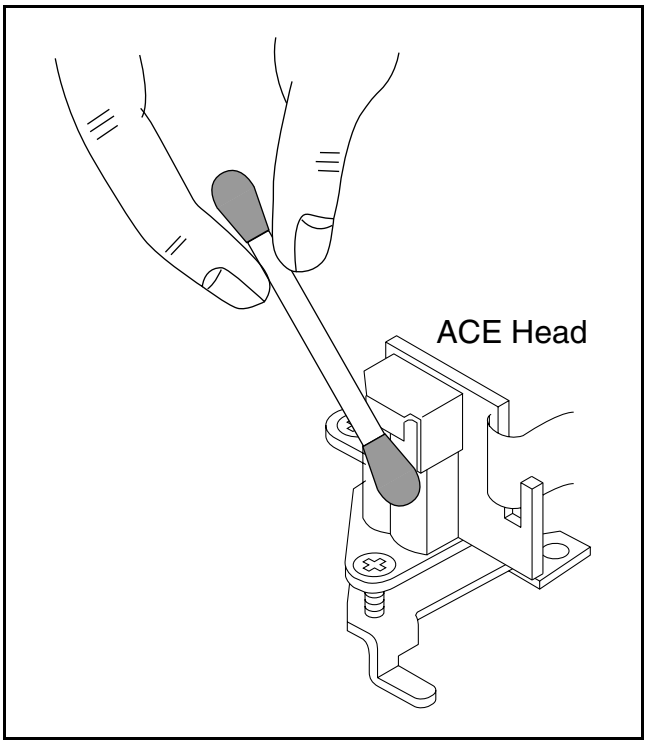
Clean the head with a cotton swab.

Procedure

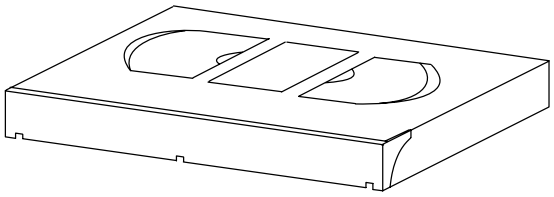
1. Remove the top cabinet.
2. Dip the cotton swab in 90% isopropyl alcohol and clean the audio control head. Be careful not to damage the upper drum and other tape running parts.

Notes:

1. Avoid cleaning the audio control head vertically.
2. Wait for the cleaned part to dry thoroughly before operating the unit or damage may occur.



SERVICE FIXTURE AND TOOLS



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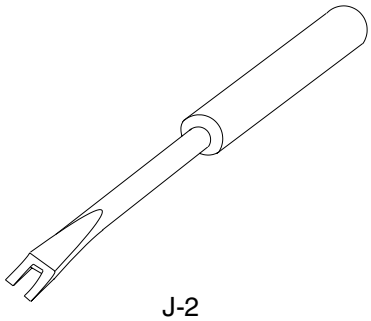
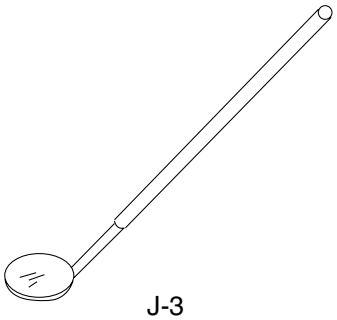
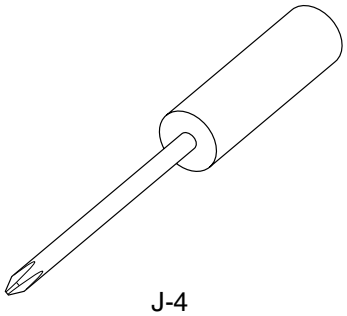


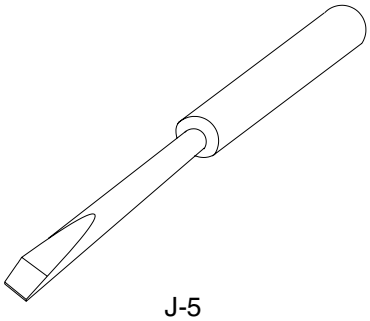
J-2



J-3



J-4



J-5

Ref. No.	Name	Part No.	Adjustment
J-1-1	Alignment Tape	FL8A	Head Adjustment of Audio Control Head
J-1-2	Alignment Tape	FL8N (2Head only) FL8NW (4Head only)	Azimuth and X Value Adjustment of Audio Control Head / Adjustment of Envelope Waveform
J-2	Guide Roller Adj.Screwdriver	Available Locally	Guide Roller
J-3	Mirror	Available Locally	Tape Transportation Check
J-4	Azimuth Adj.Screwdriver +	Available Locally	A/C Head Height
J-5	X Value Adj.Screwdriver -	Available Locally	X Value

MECHANICAL ALIGNMENT PROCEDURES

Explanation of alignment for the tape to correctly run starts on the next page. Refer to the information below on this page if a tape gets stuck, for example, in the mechanism due to some electrical trouble of the unit.

Service Information

A. Method for Manual Tape Loading/Unloading

To load a cassette tape manually:

1. Disconnect the AC plug.
2. Remove the Top Case and Front Assembly.
3. Insert a cassette tape. Though the tape will not be automatically loaded, make sure that the cassette tape is all the way in at the inlet of the Cassette Holder. To confirm this, lightly push the cassette tape further in and see if the tape comes back out, by a spring motion, just as much as you have pushed in.
4. Turn the LDG Belt in the appropriate direction shown in Fig. M1 for a minute or two to complete this task.

To unload a cassette tape manually:

1. Disconnect the AC plug.
2. Remove the Top Case and Front Assembly.
3. Make sure that the Moving guide preparations are in the Eject Position.
4. Turn the LDG Belt in the appropriate direction shown in Fig. M1 until the Moving guide preparations come to the Eject Position. Stop turning when the preparations begin clicking or can not be moved further. However, the tape will be left wound around the cylinder.
5. Turn the LDG Belt in the appropriate direction continuously, and the cassette tape will be ejected. Allow a minute or two to complete this task.

B. Method to place the Cassette Holder in the tape-loaded position without a cassette tape

1. Disconnect the AC Plug.
2. Remove the Top Case and Front Assembly.
3. Turn the LDG Belt in the appropriate direction shown in Fig. M1. Release the locking tabs shown in Fig. M1 and continue turning the LDG Belt until the Cassette Holder comes to the tape-loaded position. Allow a minute or two to complete this task.

Top View

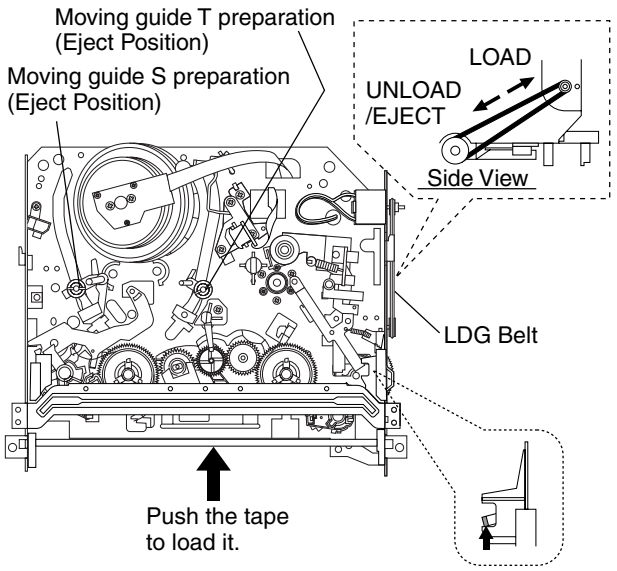


Fig. M1

Bottom View

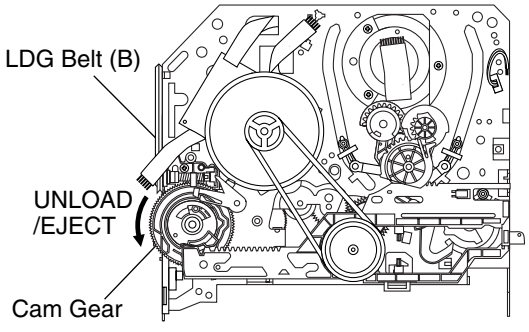


Fig. M2

1.Tape Interchangeability Alignment

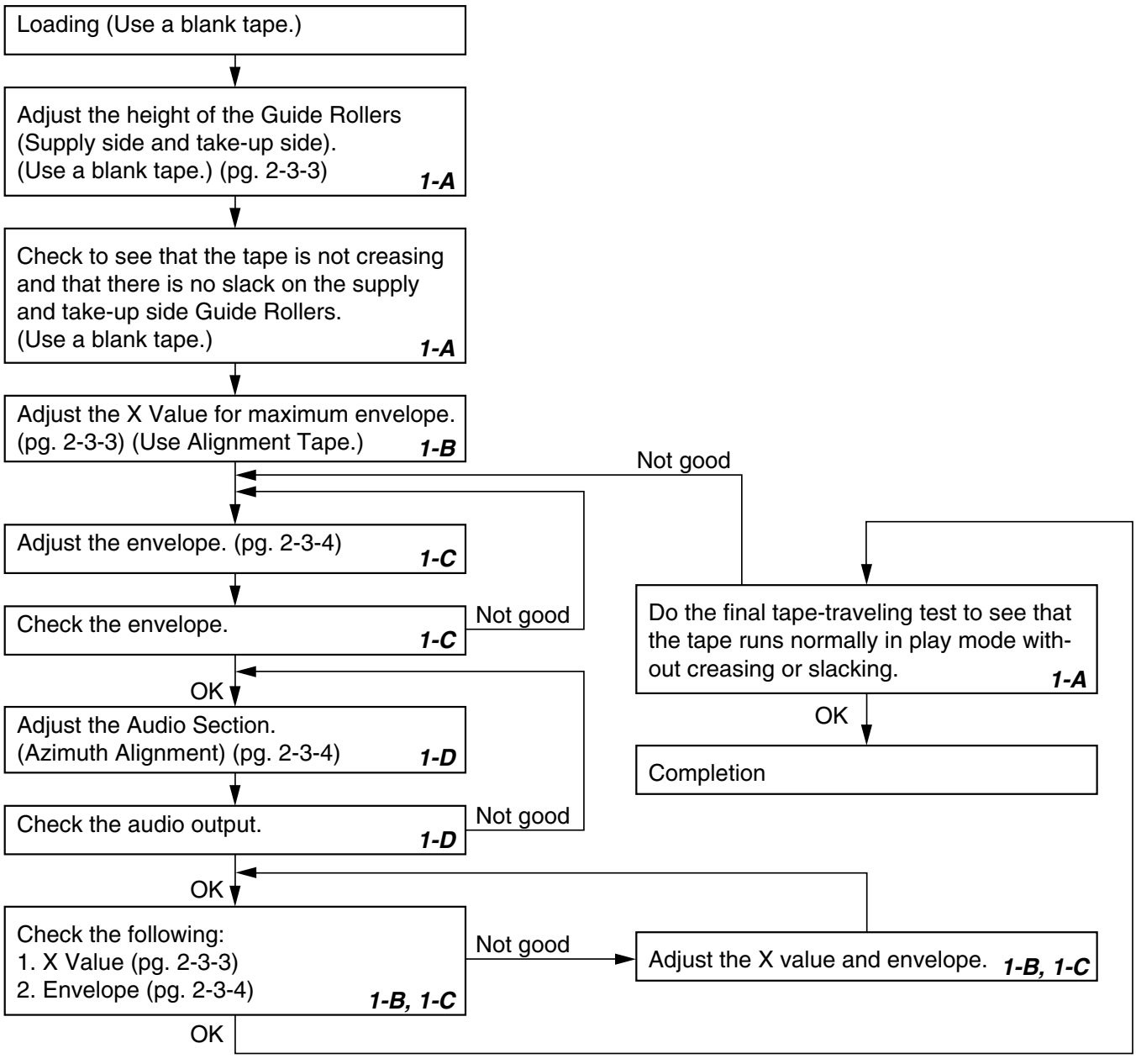
Note:
To do these alignment procedures, make sure that the Tracking Control Circuit is set to the center position every time a tape is loaded or unloaded. (Refer to page 2-3-4, procedure 1-C, step 2.)

Equipment required:

Dual Trace Oscilloscope
VHS Alignment Tape (FL8NW)
Guide Roller Adj. Screwdriver
X-Value Adj. Screwdriver

Note: Before starting this Mechanical Alignment, do all Electrical Adjustment procedures.

Flowchart of Alignment for tape traveling


Loading (Use a blank tape.)
Adjust the height of the Guide Rollers (Supply side and take-up side). (Use a blank tape.) (pg. 2-3-3) 1-A
Check to see that the tape is not creasing and that there is no slack on the supply and take-up side Guide Rollers. (Use a blank tape.) 1-A
Adjust the X Value for maximum envelope. (pg. 2-3-3) (Use Alignment Tape.) 1-B
Not good
Adjust the envelope. (pg. 2-3-4) 1-C
Check the envelope. 1-C
Not good
OK
Adjust the Audio Section. (Azimuth Alignment) (pg. 2-3-4) 1-D
Check the audio output. 1-D
Not good
OK
Check the following:
1. X Value (pg. 2-3-3)
2. Envelope (pg. 2-3-4) 1-B, 1-C
Not good
Adjust the X value and envelope. 1-B, 1-C
OK
Do the final tape-traveling test to see that the tape runs normally in play mode without creasing or slacking. 1-A
OK
Completion

1-A. Preliminary/Final Checking and Alignment of Tape Path

Purpose:

To make sure that the tape path is well stabilized.

Symptom of Misalignment:

If the tape path is unstable, the tape will be damaged.

Note: Do not use an Alignment Tape for this procedure. If the unit is not correctly aligned, the tape may be damaged.

1. Playback a blank cassette tape and check to see that the tape runs without creasing at Guide Rollers [2] and [3], and at points A and B on the lead surface. (Refer to Fig. M3 and M4.)
2. If creasing is apparent, align the height of the guide rollers by turning the top of Guide Rollers [2] and [3] with a Guide Roller Adj. Screwdriver. (Refer to Fig. M3 and M5.)

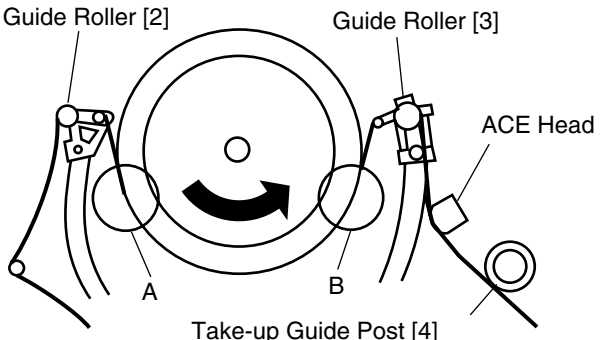


Fig. M3

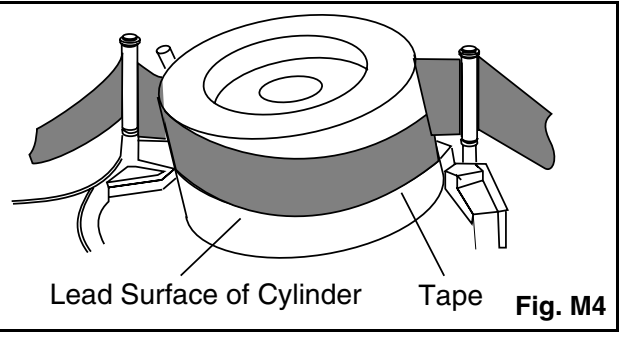


Fig. M4

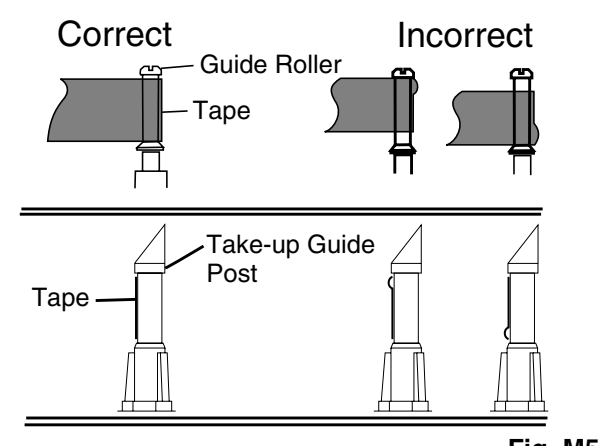


Fig. M5

3. Check to see that the tape runs without creasing at Take-up Guide Post [4] or without snaking between Guide Roller [3] and AC Head. (Fig. M3 and M5)
4. If creasing or snaking is apparent, adjust the Tilt Adj. Screw of the AC Head. (Fig. M6)

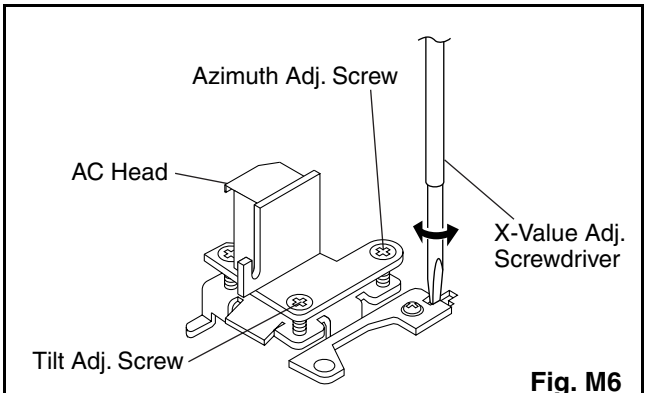


Fig. M6

1-B. X Value Alignment

Purpose:

To align the Horizontal Position of the Audio/Control/Erase Head.

Symptom of Misalignment:

If the Horizontal Position of the Audio/Control/Erase Head is not properly aligned, maximum envelope cannot be obtained at the Neutral position of the Tracking Control Circuit.

1. Connect the oscilloscope to TP301 (C-PB) and TP513 (CTL) on the Main CBA. Use TP302 (RF-SW) as a trigger.
2. Playback the Gray Scale of the Alignment Tape (FL8NW) and confirm that the PB FM signal is present.
3. Set the Tracking Control Circuit to the center position by pressing CH UP button then " PLAY " button on the unit. (Refer to note on bottom of page 2-3-4.)
4. Use the X-Value Adj. Screwdriver so that the PB FM signal at TP301 (C-PB) is maximum. (Fig. M6)
5. Press CH UP button on the unit until the CTL waveform has shifted by approx. +2msec. Make sure that the envelope is simply attenuated (shrinks in height) during this process so that you will know the envelope has been at its peak.

6. Press CH DOWN button on the unit until the CTL waveform has shifted from its original position (not the position achieved in step 5, but the position of CTL waveform in step 4) by approximately -2msec. Make sure that the envelope is simply attenuated (shrinks in height) once CTL waveform passes its original position and is further brought in the minus direction.
7. Set the Tracking Control Circuit to the center position by pressing CH UP button and then " PLAY " button.

1-C. Checking/Adjustment of Envelope Waveform

Purpose:

To achieve a satisfactory picture and precise tracking.

Symptom of Misalignment:

If the envelope output is poor, noise will appear in the picture. The tracking will then lose precision and the playback picture will be distorted by any slight variation of the Tracking Control Circuit.

1. Connect the oscilloscope to TP301 (C-PB) on the Main CBA. Use TP302 (RF-SW) as a trigger.
2. Playback the Gray Scale on the Alignment Tape (FL8NW). Set the Tracking Control Circuit to the center position by pressing CH UP button and then " PLAY " button on the unit. Adjust the height of Guide Rollers [2] and [3] (Fig. M3, Page 2-3-3) watching the oscilloscope display so that the envelope becomes as flat as possible. To do this adjustment, turn the top of the Guide Roller with the Guide Roller Adj. Screwdriver.
3. If the envelope is as shown in Fig. M7, adjust the height of Guide Roller [2] (Refer to Fig. M3) so that the waveform looks like the one shown in Fig. M9.
4. If the envelope is as shown in Fig. M8, adjust the height of Guide Roller [3] (Refer to Fig. M3) so that the waveform looks like the one shown in Fig. M9.
5. When Guide Rollers [2] and [3] (Refer to Fig.M3) are aligned properly, there is no envelope drop either at the beginning or end of track as shown in Fig. M9.

Note: Upon completion of the adjustment of Guide Rollers [2] and [3] (Refer to Fig. M3), check the X Value by pushing the CH UP or DOWN buttons alternately, to check the symmetry of the envelope. Check the number of pushes to ensure center position. The number of pushes CH UP button to achieve 1/2 level of envelope should match the number of pushes CH DOWN button from center. If required, redo the "X Value Alignment."

1-D. Azimuth Alignment of Audio/Control/ Erase Head

Purpose:

To correct the Azimuth alignment so that the Audio/ Control/Erase Head meets tape tracks properly.

Symptom of Misalignment:

If the position of the Audio/Control/Erase Head is not properly aligned, the Audio S/N Ratio or Frequency Response will be poor.

1. Connect the oscilloscope to the audio output jack on the rear side of the deck.
2. Playback the alignment tape (FL8NW) and confirm that the audio signal output level is 8kHz.
3. Adjust Azimuth Adj. Screw so that the output level on the AC Voltmeter or the waveform on the oscilloscope is at maximum. (Fig. M6)

Dropping envelope level at the beginning of track.

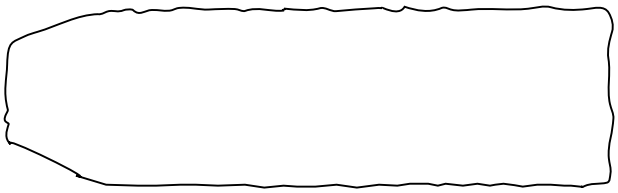


Fig. M7

Dropping envelope level at the end of track.

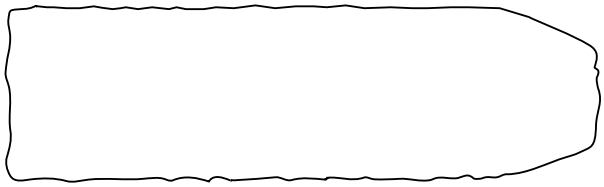


Fig. M8

Envelope is adjusted properly. (No envelope drop)

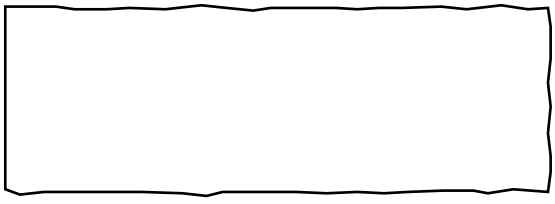


Fig. M9

DISASSEMBLY/ASSEMBLY PROCEDURES OF DECK MECHANISM

Before following the procedures described below, be sure to remove the deck assembly from the cabinet. (Refer to CABINET DISASSEMBLY INSTRUCTIONS on page 1-7-1.)
All the following procedures, including those for adjustment and replacement of parts, should be done in Eject mode; see the positions of [41] and [42] in Fig.DM1 on page 2-4-3. When reassembling, follow the steps in reverse order.

STEP /LOC. No.	START-ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[1]	[1]	Guide Holder A	T	DM3	2(S-1)	
[2]	[1]	Cassette Holder Assembly	T	DM4		
[3]	[2]	Slider (SP)	T	DM5	*(L-1)	
[4]	[2]	Slider (TU)	T	DM5	*(L-2)	
[5]	[4]	Lock Lever	T	DM5	*(L-3),*(P-1)	
[6]	[2]	Cassette Plate	T	DM5		
[7]	[7]	Cylinder Assembly	T	DM1,DM6	Desolder, 3(S-2)	
[8]	[8]	Loading Motor Assembly	T	DM1,DM7	Desolder, LDG Belt, 2(S-3)	
[9]	[9]	AC Head Assembly	T	DM1,DM7	(S-4)	
[10]	[2]	Tape Guide Arm Assembly	T	DM1,DM8	*(P-2)	
[11]	[10]	C Door Opener	T	DM1,DM8	*(L-4)	
[12]	[11]	Pinch Arm (B)	T	DM1,DM8	*(P-3)	
[13]	[12]	Pinch Arm Assembly	T	DM1,DM8		
[14]	[14]	FE Head Assembly	T	DM1,DM9	(S-5)	
[15]	[15]	Prism	T	DM1,DM9	(S-6)	
[16]	[2],[15]	Sensor Gear	T	DM1,DM15		
[17]	[2]	Slider Shaft	T	DM10	*(L-5)	
[18]	[17]	C Drive Lever (SP)	T	DM10		
[19]	[17]	C Drive Lever (TU)	T	DM10	(S-7),*(P-4)	
[20]	[7],[8], [10]	Capstan Motor	B	DM2,DM11	3(S-8), Cap Belt	
[21]	[21]	Clutch Assembly	B	DM2,DM12	(C-1)	
[22]	[22]	Cam Holder (F) Assembly	B	DM2,DM12	*(L-6)	
[23]	[23]	Cam Gear (B)	B	DM2,DM12	(C-4)*(P-5)	
[24]	[24]	Mode Gear	B	DM2,DM13	(C-2)	
[25]	[21],[23], [24]	Mode Lever	B	DM2,DM13	(C-3), *(L-8)	
[26]	[22]	Worm Holder	B	DM2,DM13	(S-9),*(L-9),*(L-10)	
[27]	[26]	Pulley Assembly	B	DM2,DM13		
[28]	[25],[26]	Cam Gear (A)	B	DM2,DM13		
[29]	[25]	Idler Gear	B	DM1,DM14		
[30]	[29]	Idler Arm	B	DM1,DM14	*(L-11)	
[31]	[25]	BT Arm	B	DM2,DM14	*(P-6)	
[32]	[25]	Loading Arm (SP) Assembly	B	DM2,DM14		(+)Refer to Alignment Sec.Pg.2-4-9

STEP /LOC. No.	START-ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[33]	[32]	Loading Arm (TU) Assembly	B	DM2,DM14		(+)Refer to Alignment Sec.Pg.2-4-9
[34]	[2],[25]	M Brake (TU) Assembly	T	DM1,DM15	*(P-7), Brake Belt	
[35]	[2],[25]	M Brake (SP) Assembly	T	DM1,DM15	*(P-8)	
[36]	[35]	Tension Lever Assembly	T	DM1,DM15		
[37]	[36]	T Lever Holder	T	DM15	*(L-12)	
[38]	[34]	Reel (TU)(D2)	T	DM1,DM15		
[39]	[38]	M Gear	T	DM1,DM15		
[40]	[36]	Reel (SP)(D2)	T	DM1,DM15		
[41]	[32],[36]	Moving Guide S Preparation	T	DM1,DM16		
[42]	[33]	Moving Guide T Preparation	T	DM1,DM16		
[43]	[19]	TG Post Assembly	T	DM1,DM16	*(L-13)	
[44]	[28]	Rack Assembly	R	DM17		(+)Refer to Alignment Sec.Pg.2-4-10
[45]	[44]	F Door Opener	R	DM17		
[46]	[46]	Cleaner Assembly	T	DM1,DM6		
[47]	[46]	CL Post	T	DM6	*(L-14)	
↓ (1)	↓ (2)	↓ (3)	↓ (4)	↓ (5)	↓ (6)	↓ (7)

(1): Follow steps in sequence. When reassembling, follow the steps in reverse order.
These numbers are also used as identification (location) No. of parts in the figures.

(2): Indicates the part to start disassembling with in order to disassemble the part in column (1).

(3): Name of the part

(4): Location of the part: T=Top B=Bottom R=Right L=Left

(5): Figure Number

(6): Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P=Spring, W=Washer, C=Cut Washer, S=Screw, *=Unhook, Unlock, Release, Unplug, or Desolder
e.g., 2(L-2) = two Locking Tabs (L-2).

(7): Adjustment Information for Installation
(+):Refer to Deck Exploded Views for lubrication.

.

Top View

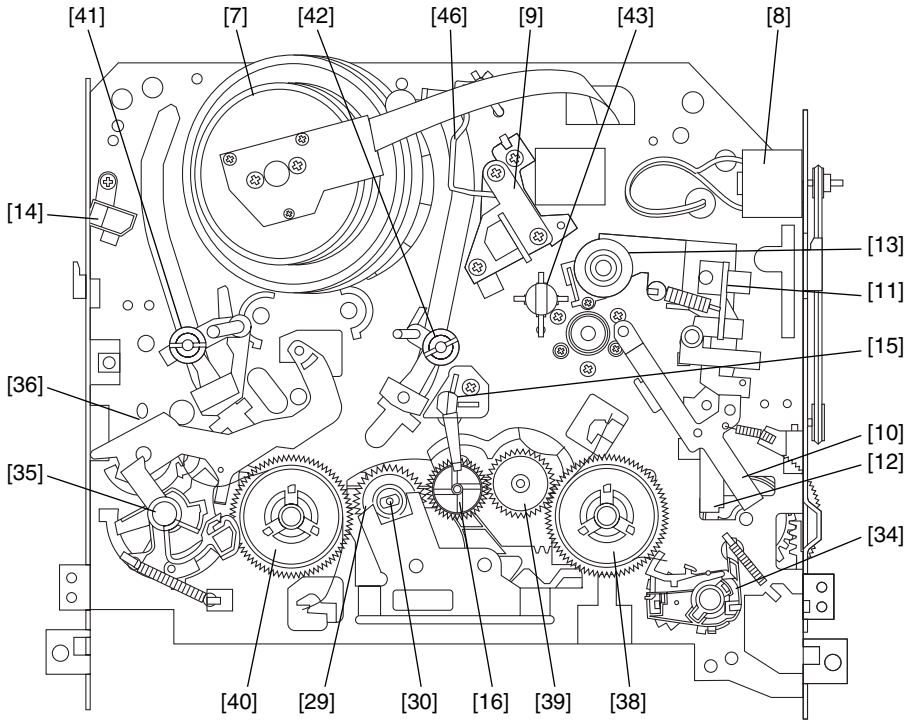


Fig. DM1

Bottom View

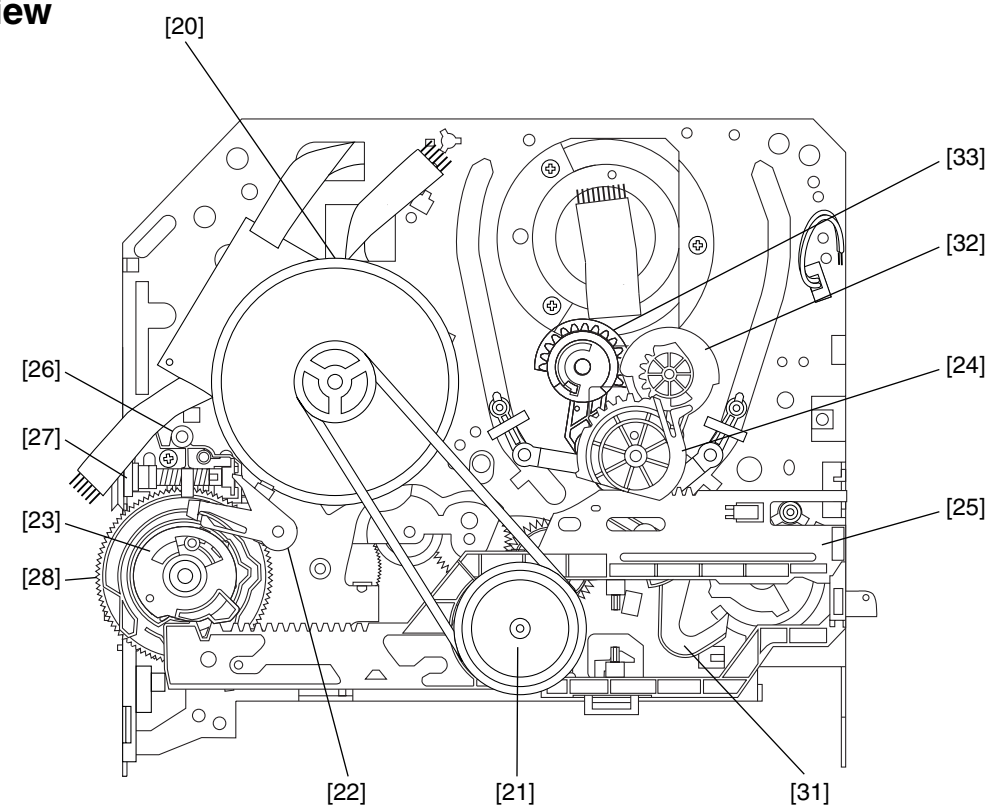


Fig. DM2

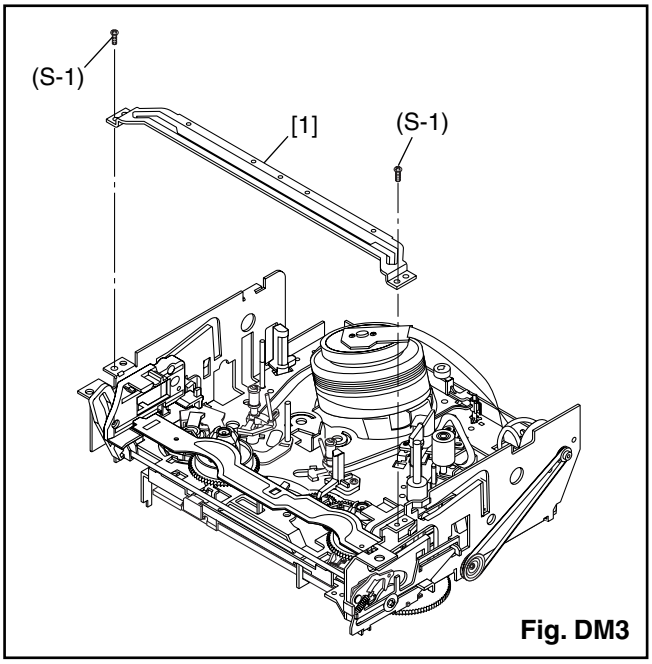


Fig. DM3

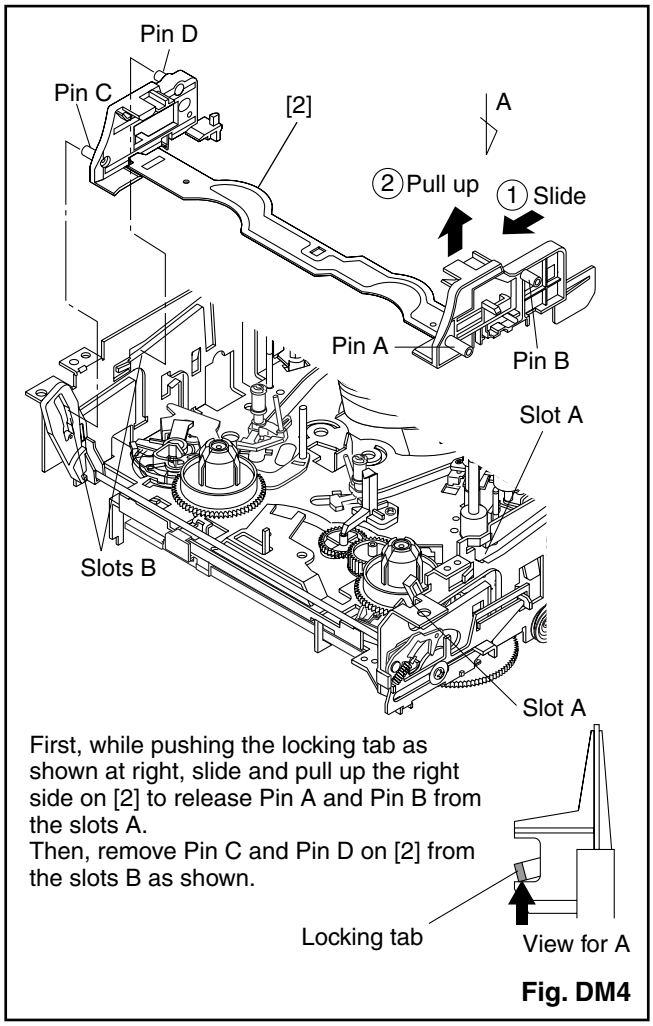

Pin D
Pin C
[2]
A
2 Pull up
1 Slide
Pin A
Pin B
Slot A
Slots B
Slot A
First, while pushing the locking tab as shown at right, slide and pull up the right side on [2] to release Pin A and Pin B from the slots A.
Then, remove Pin C and Pin D on [2] from the slots B as shown.
Locking tab
View for A

Fig. DM4

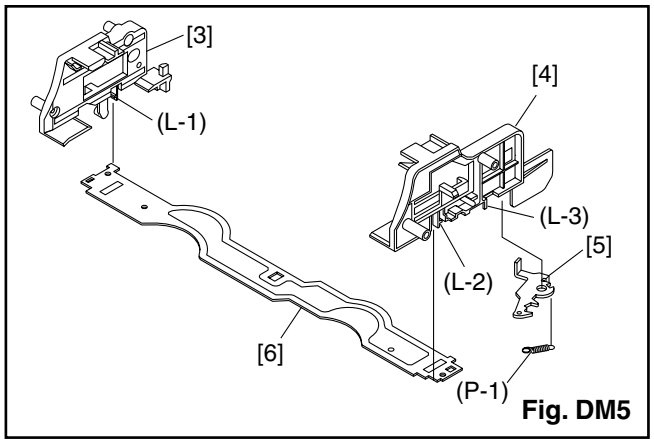


Fig. DM5

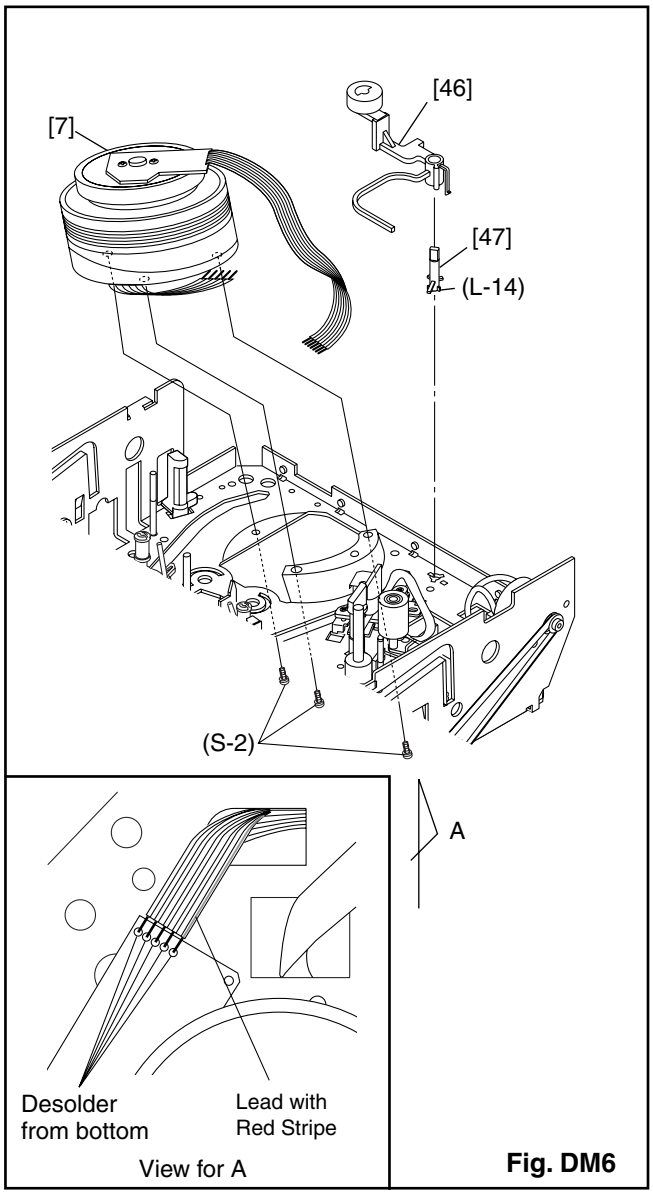


Fig. DM6

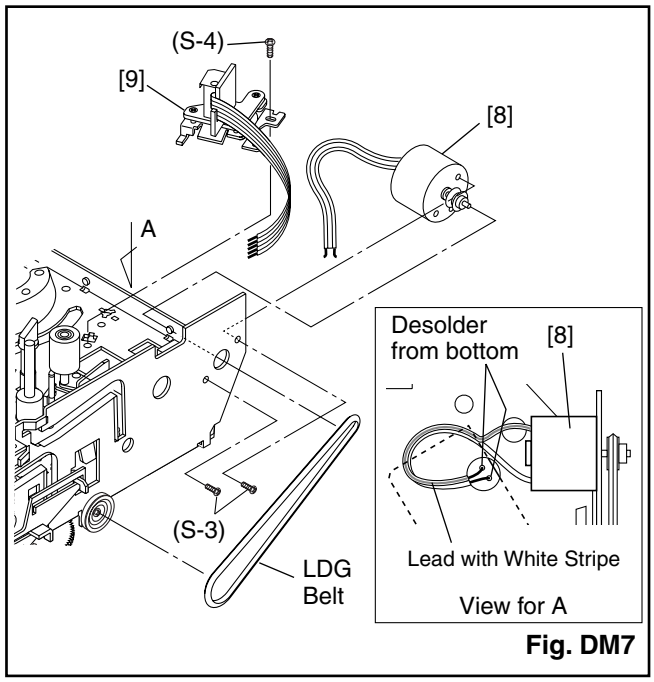


Fig. DM7

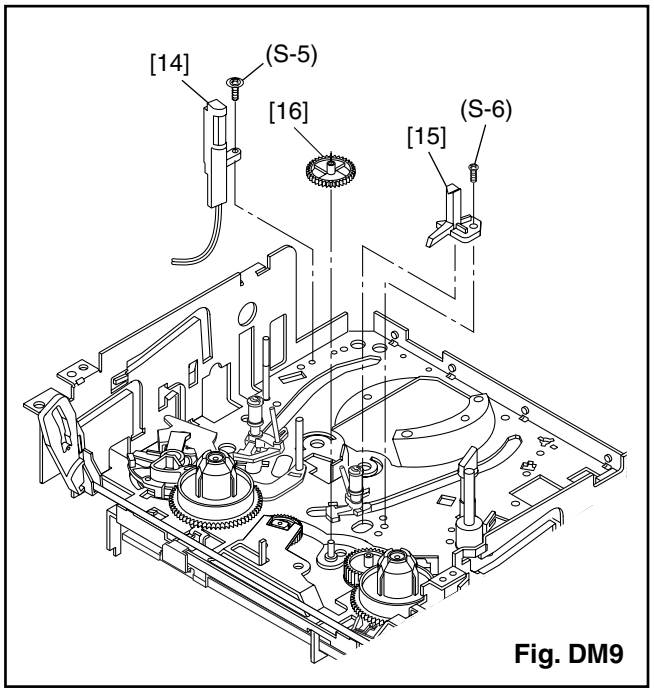


Fig. DM9

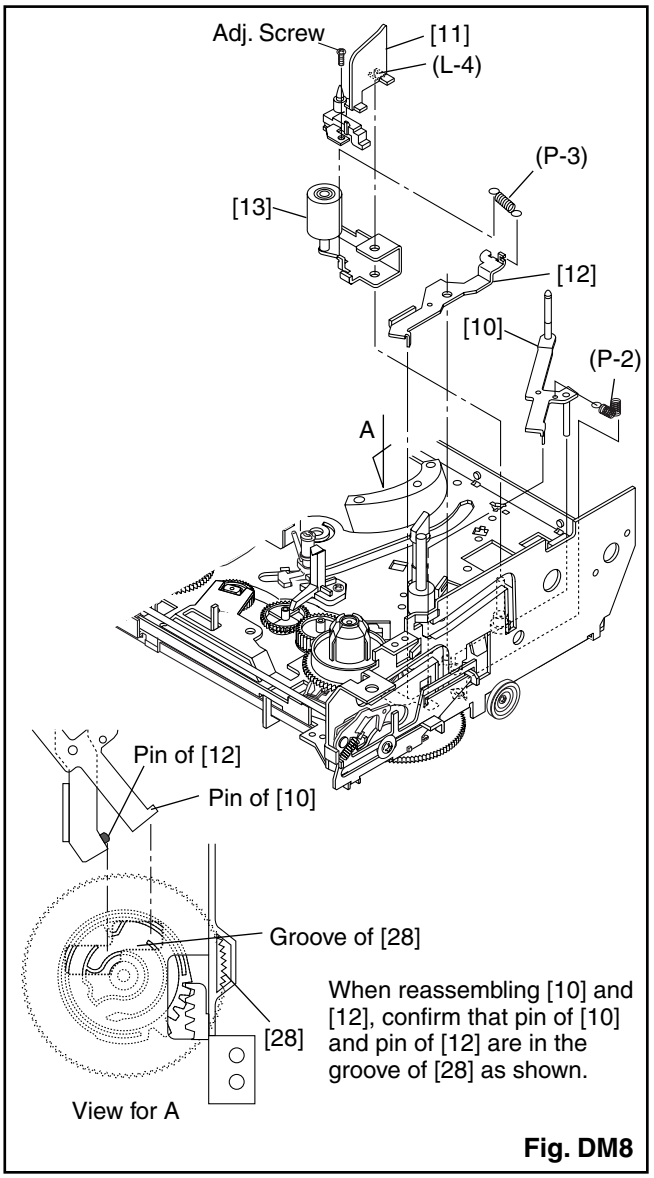


Fig. DM8

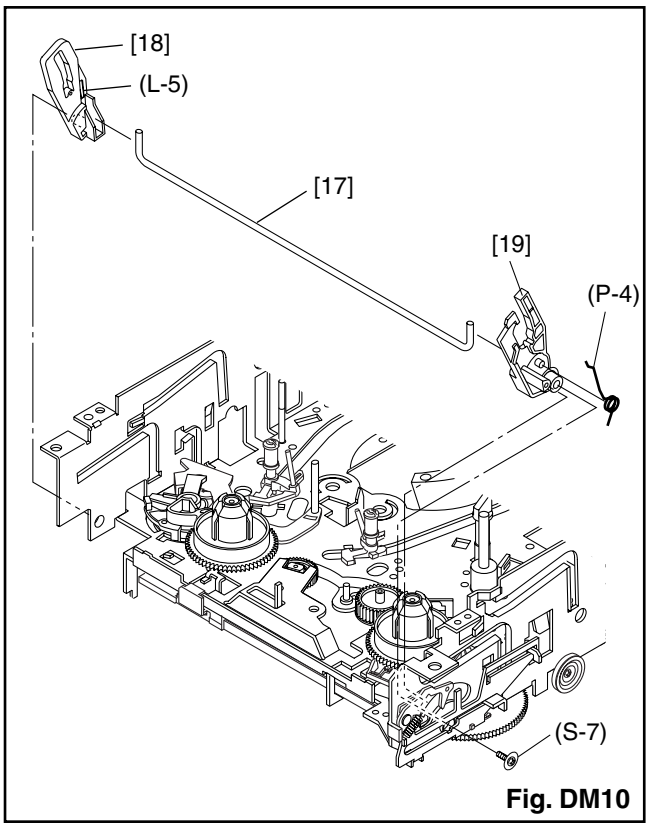


Fig. DM10

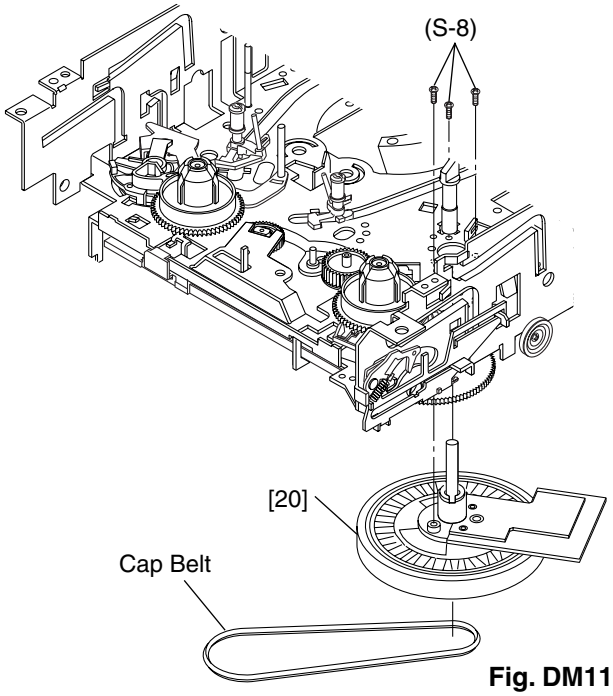
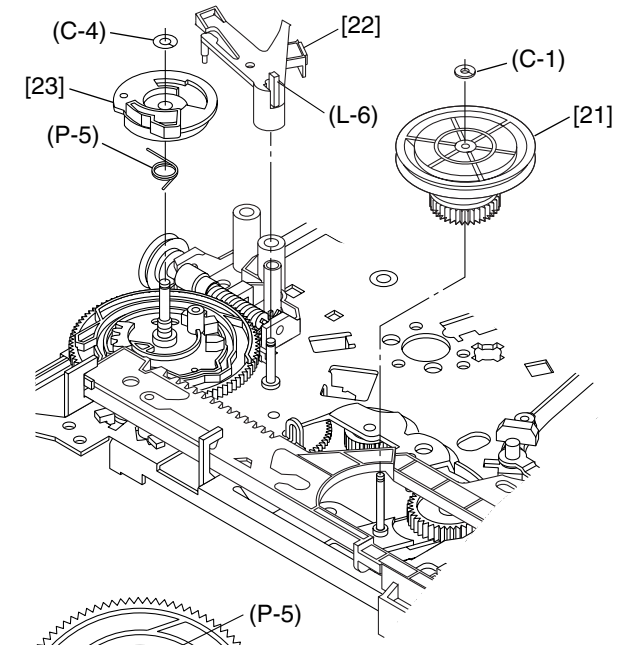
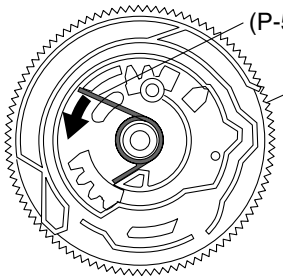
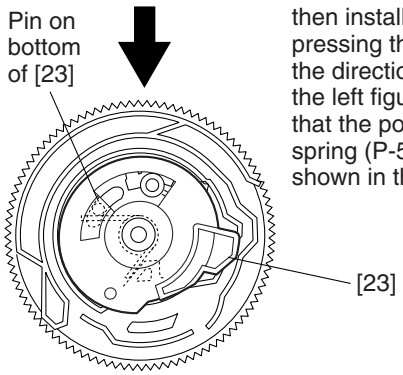


Fig. DM11

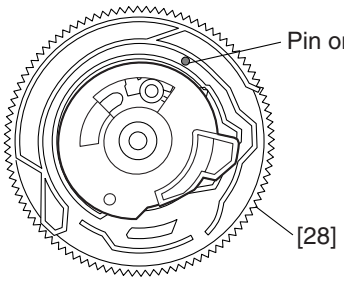




When installing [23], install the spring (P-5) to [28] as shown in the left figure, and then install [23] while pressing the spring (P-5) to the direction of the arrow in the left figure and confirming that the position of the spring (P-5) is placed as shown in the left figure.

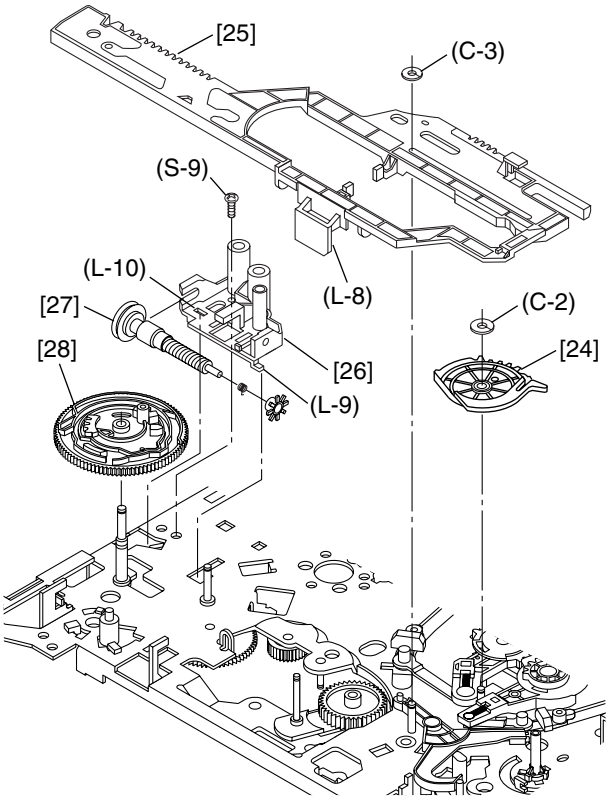


Top View

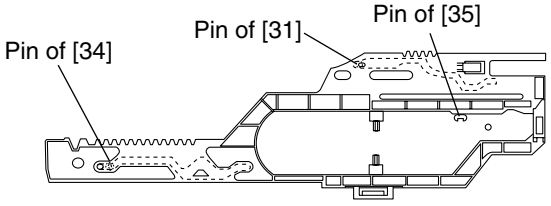


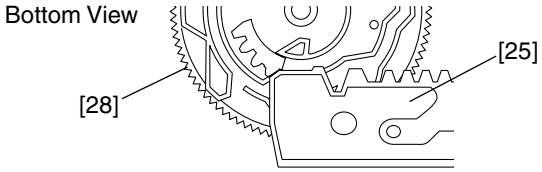
Position of pin on [22]

Fig. DM12

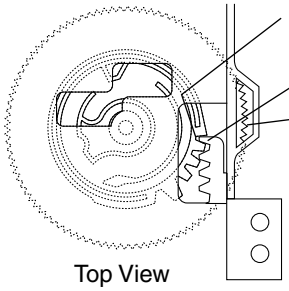


Position of Mode Lever when installed





Align [25] and [28] as shown.



When reassembling [28], align the first groove on [28] to the first tooth on [44] as shown.

Fig. DM13

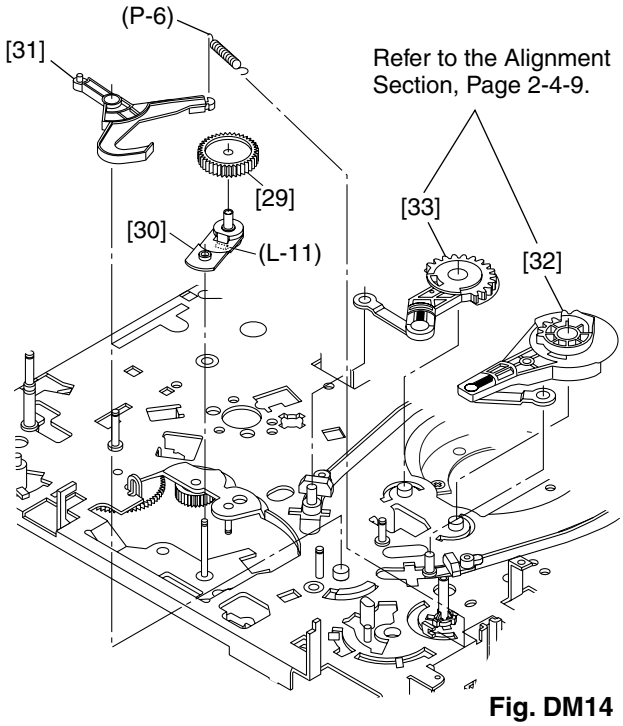


Fig. DM14

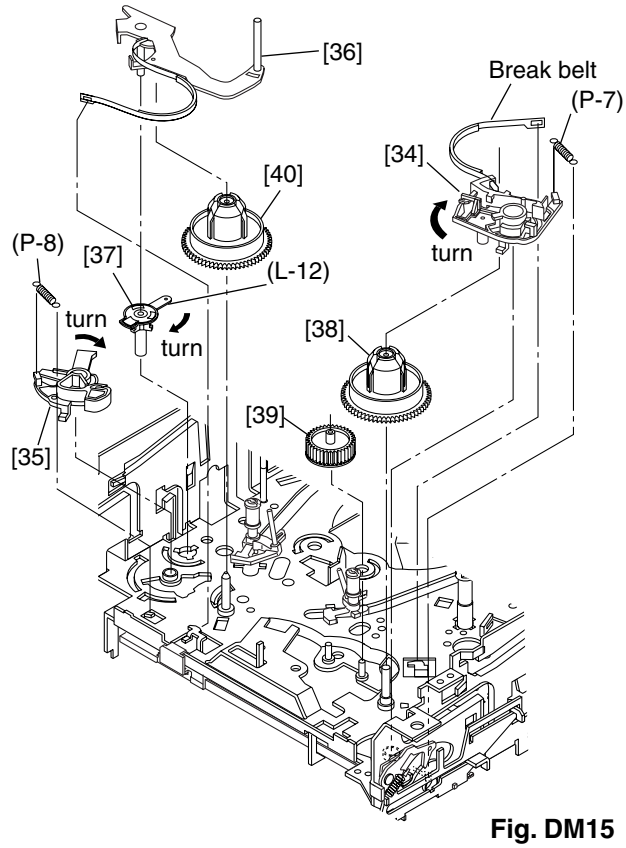


Fig. DM15

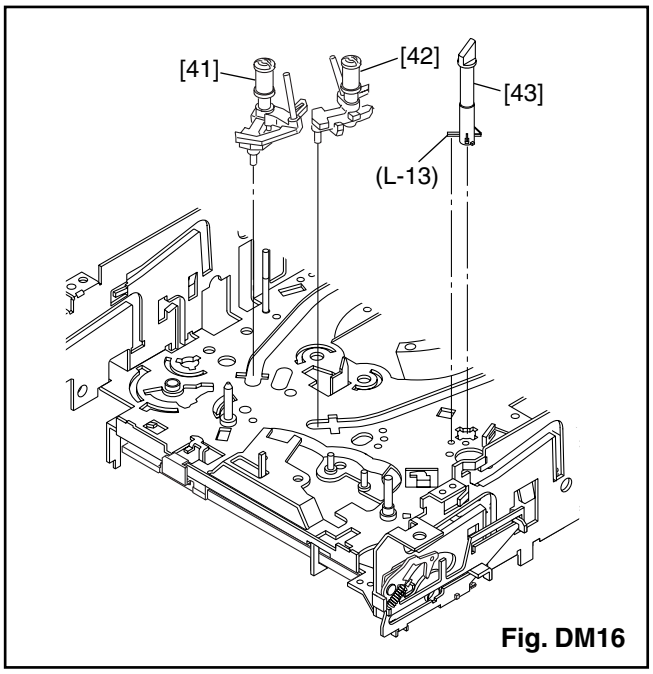


Fig. DM16

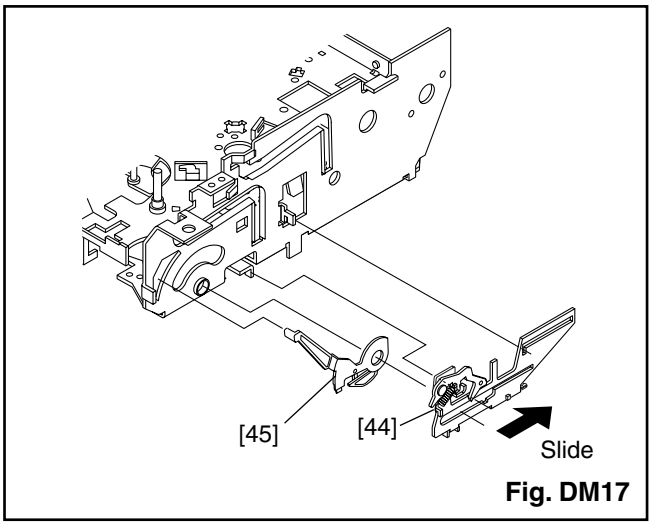


Fig. DM17

ALIGNMENT PROCEDURES OF MECHANISM

The following procedures describe how to align the individual gears and levers that make up the tape loading/unloading mechanism. Since information about the state of the mechanism is provided to the System Control Circuit only through the Mode Switch, it is essential that the correct relationship between individual gears and levers be maintained.

All alignments are to be performed with the mechanism in Eject mode, in the sequence given. Each procedure assumes that all previous procedures have been completed.

IMPORTANT:

If any one of these alignments is not performed properly, even if off by only one tooth, the unit will unload or stop and it may result in damage to the mechanical or electrical parts.

Alignment points in Eject Position

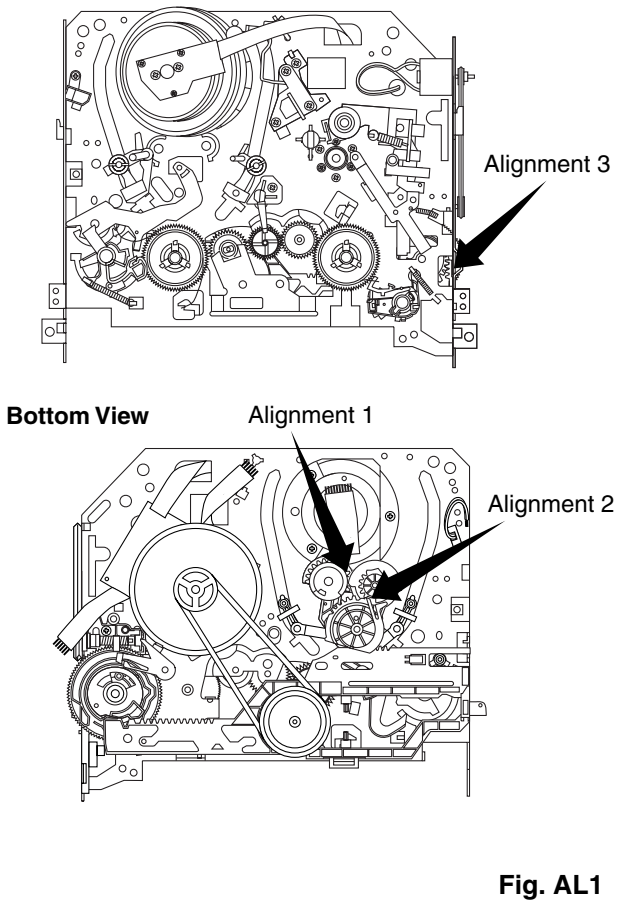


Fig. AL1

Alignment 1

Loading Arm (SP) and (TU) Assembly

Install Loading Arm (SP) and (TU) Assembly so that their triangle marks point to each other as shown in Fig. AL2.

Alignment 2

Mode Gear

Keeping the two triangles pointing at each other, install the Loading Arm (TU) Assembly so that the last tooth of the gear meets the most inside teeth of the Mode Gear. See Fig. AL2.

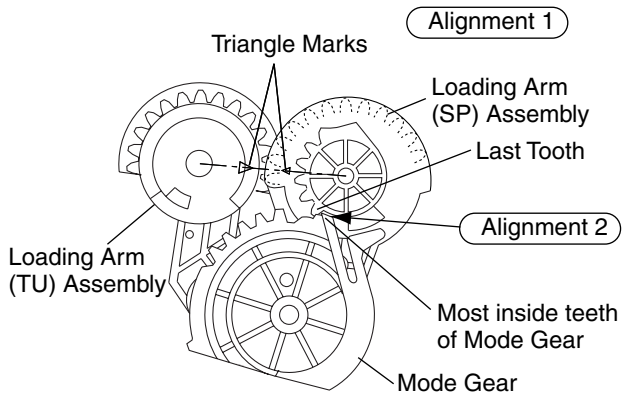


Fig. AL2

Alignment 3

Cam Gear (A), Rack Assembly

Install the Rack Assembly so that the first tooth on the gear of the Rack Assembly meets the first groove on the Cam Gear (A) as shown in Fig. AL3.

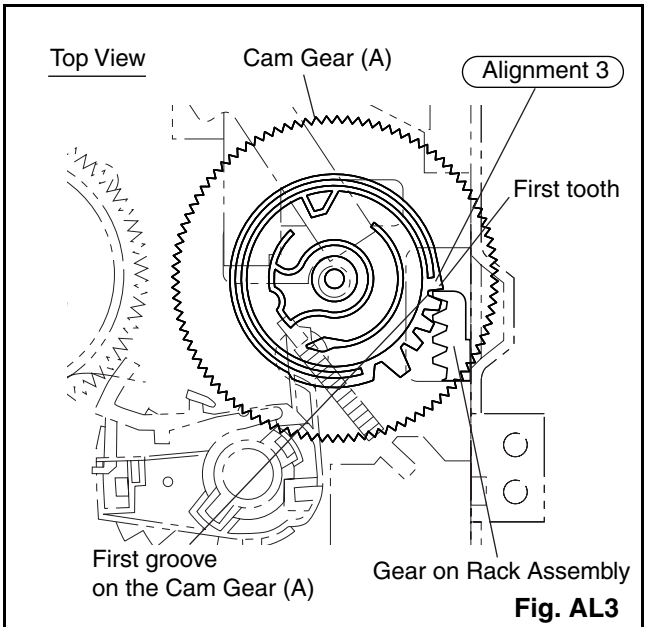


Fig. AL3

EXPLODED VIEWS AND PARTS LIST SECTION

DVD PLAYER & VIDEO CASSETTE RECORDER

DVC860D/EWD2203

Sec. 3: Exploded views and Parts List Section
- **Exploded views**
- **Parts List**

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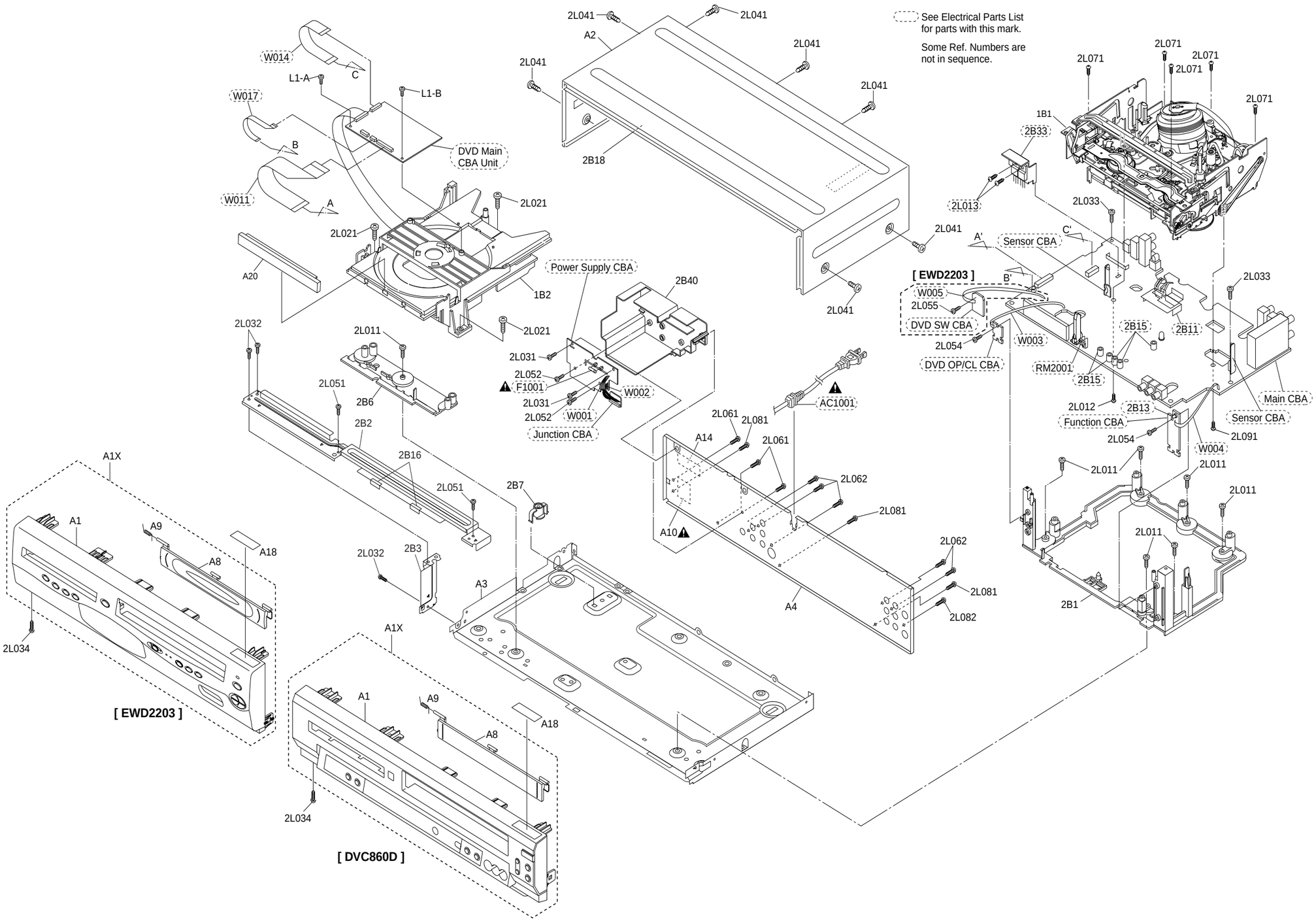
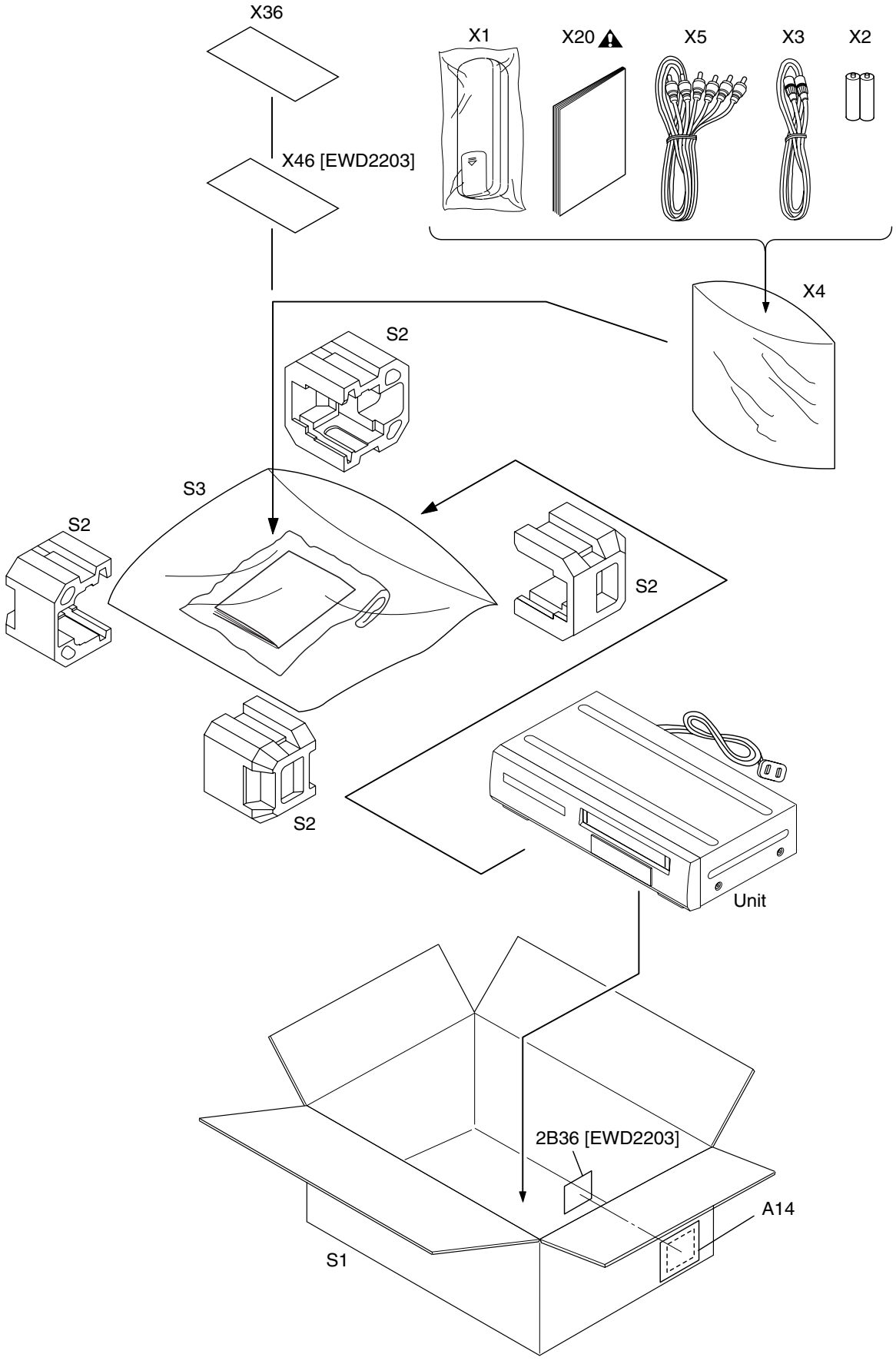
Mechanical Parts List 3-2-1
Electrical Parts List 3-3-1
Deck Parts List 3-4-1

EXPLODED VIEWS

Cabinet



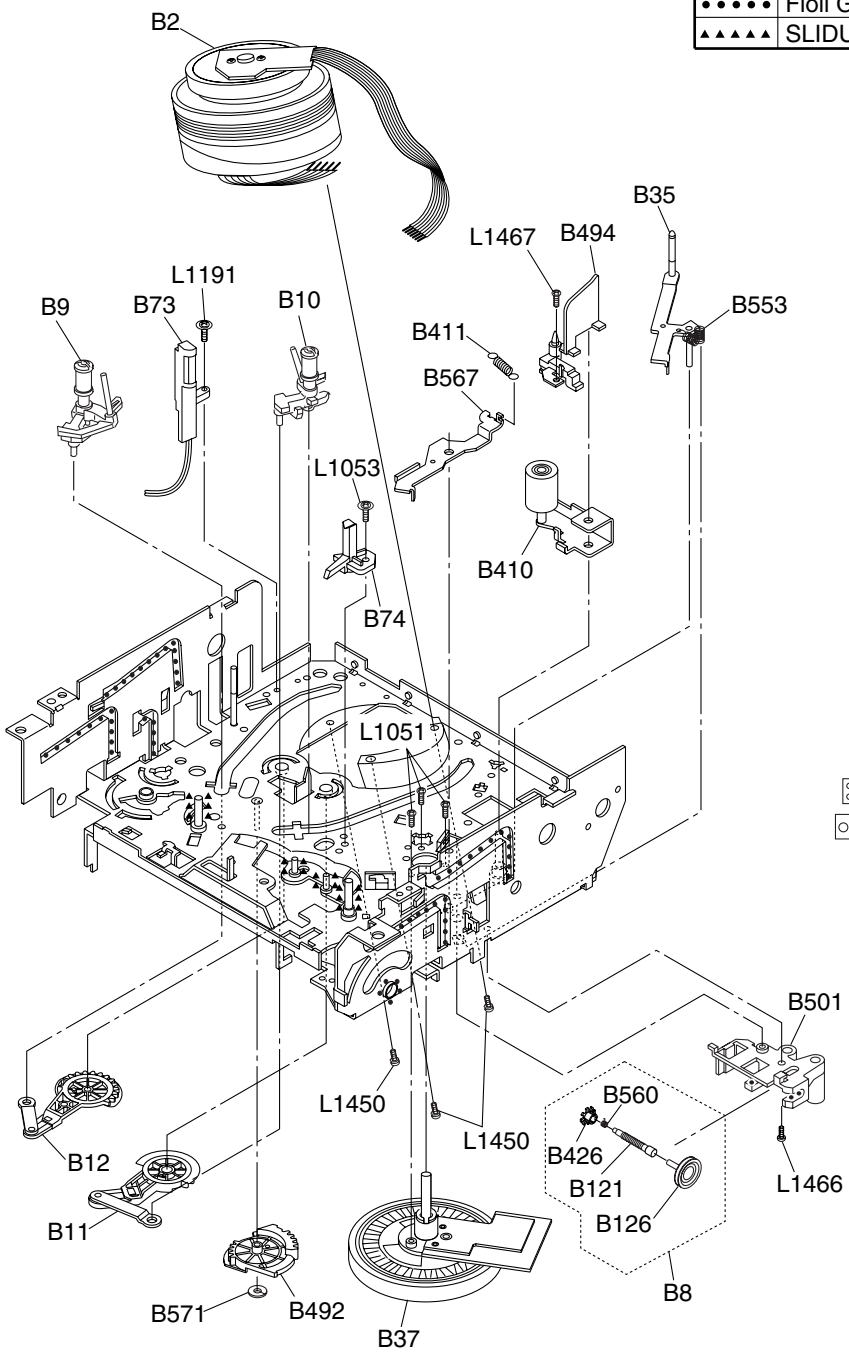
Packing

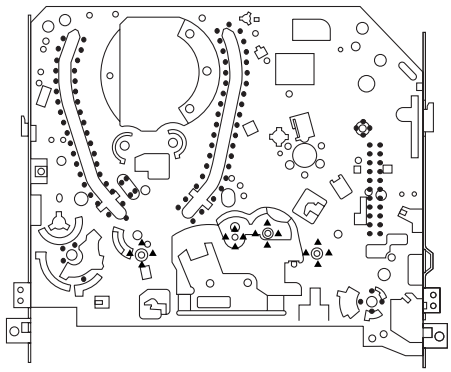

X36
X46 [EWD2203]
X1
X20
X5
X3
X2
X4
S2
S3
S2
S2
S2
Unit
2B36 [EWD2203]
A14
S1

DECK EXPLODED VIEWS

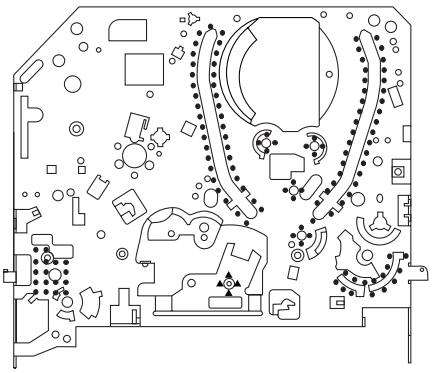
Deck Mechanism View 1

Mark	Description
●●●●●	Floil G-684G or Multemp MH-D (Blue grease)
▲▲▲▲▲	SLIDUS OIL #150





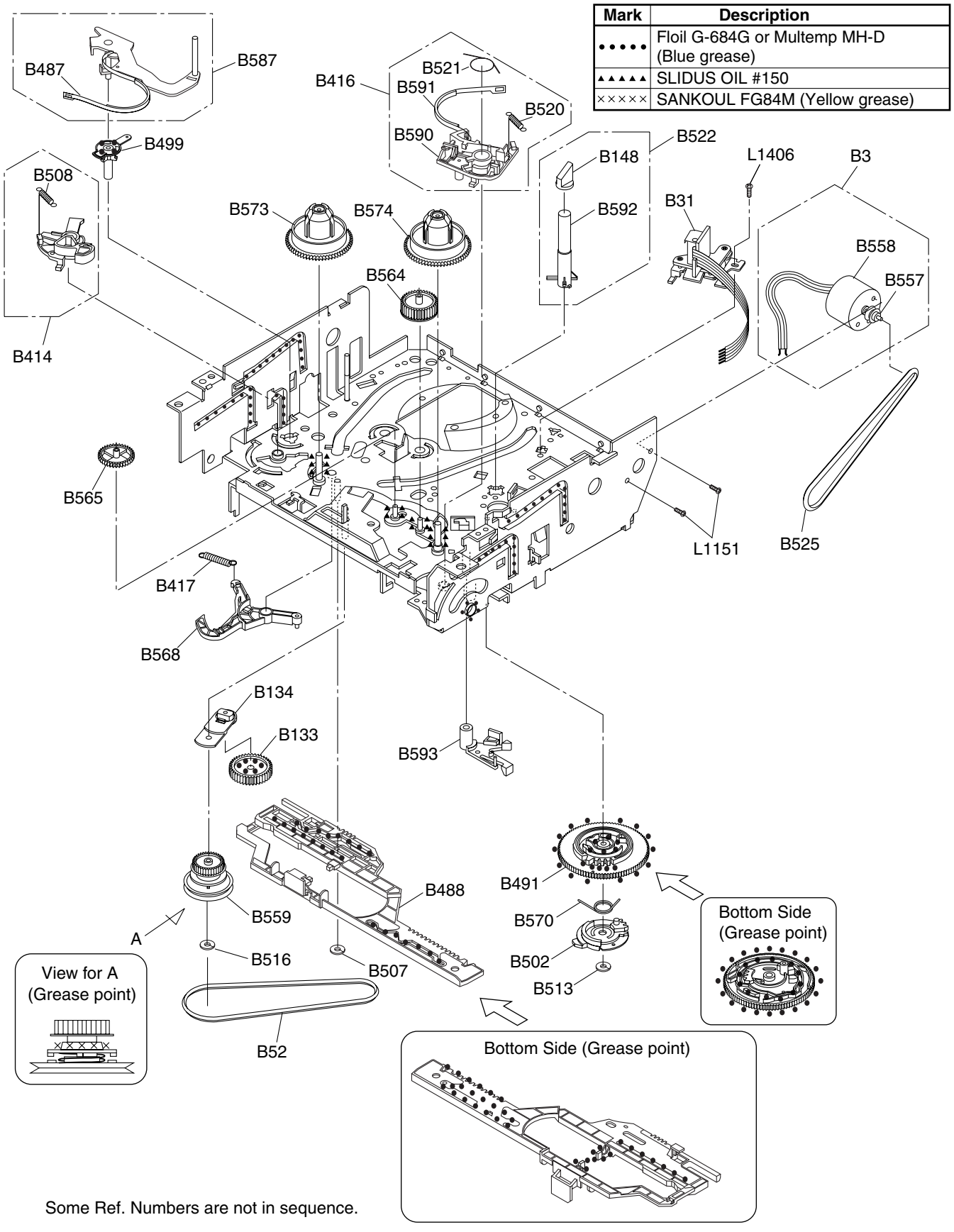
Chassis Assembly
Top View (Lubricating Point)



Chassis Assembly
Bottom View (Lubricating Point)

Some Ref. Numbers are not in sequence.

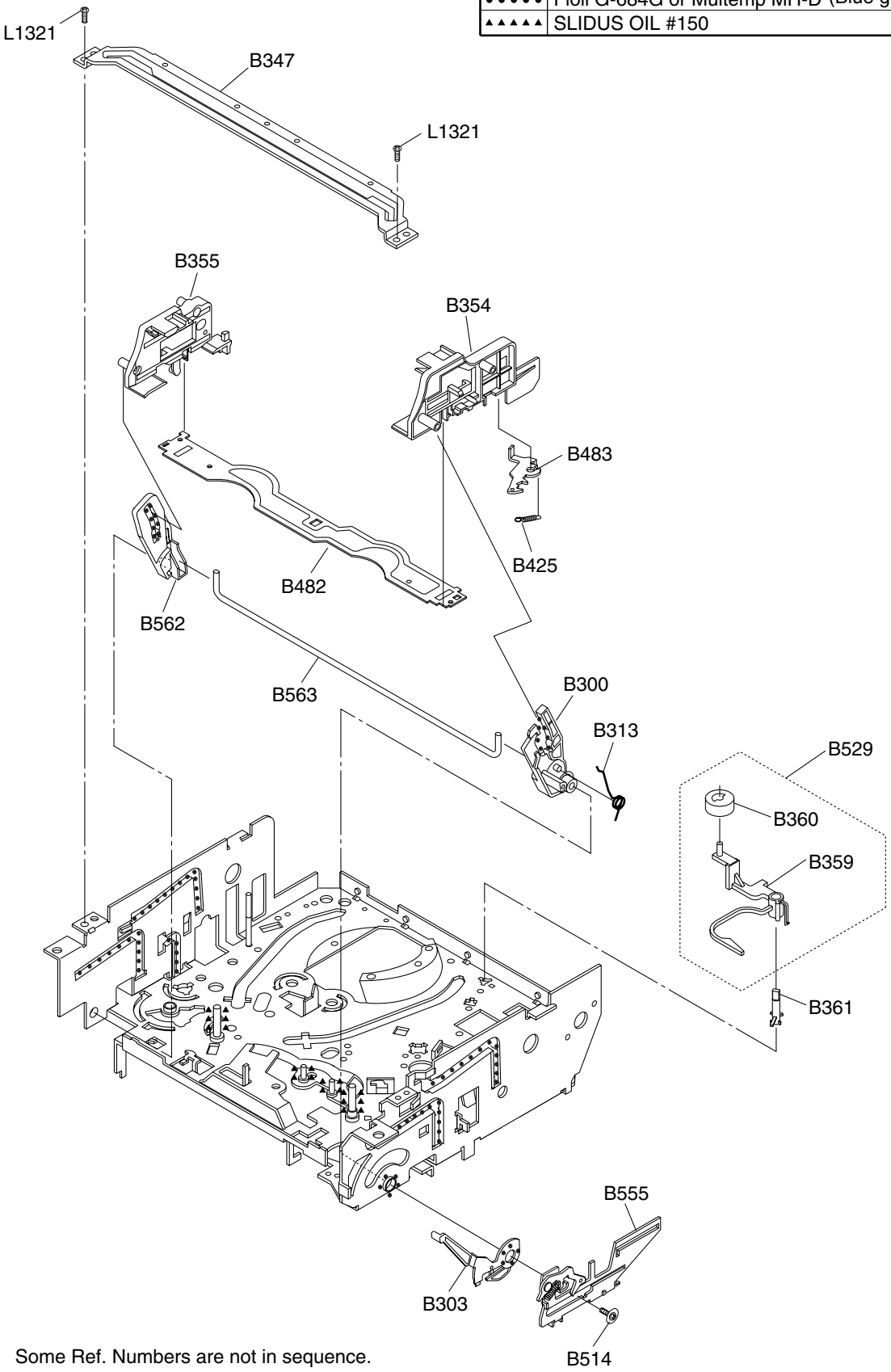
Deck Mechanism View 2



Some Ref. Numbers are not in sequence.

Deck Mechanism View 3

Mark	Description
●●●●●	Floil G-684G or Multemp MH-D (Blue grease)
▲▲▲▲▲	SLIDUS OIL #150



Some Ref. Numbers are not in sequence.

MECHANICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTE:
Parts that are not assigned part numbers (---------) are not available.

Comparison Chart of Models and Marks

Model	Mark
DVC860D	A
EWD2203	B

Ref. No.	Mark	Description	Part No.
A1X	A	FRONT ASSEMBLY H9400UD	0VM203959
A1X	B	FRONT ASSEMBLY H9410UD	0VM204041
A2		TOP COVER H9400UD	0VM101208
A3		CHASSIS(E4+U27) H9400UD	0VM101207
A4	A	PANEL, REAR H9400UD	0VM203851
A4	B	PANEL, REAR H9410UD	0VM204006
A8	A	DOOR, CASSETTE H9400UD	0VM414655
A8	B	DOOR, CASSETTE H9410UD	0VM305940
A9		SPRING, DOOR H7220UD U15	0VM408617
A10⚠	A	LABEL, RATING H9400UD	----------
A10⚠	B	LABEL, RATING H9410UD	----------
A14		LABEL, BAR CODE HB400UD	----------
A14	A	LABEL, BAR CODE H9400UD	----------
A14	B	LABEL, BAR CODE H9410UD	----------
A18	A	LABEL, TELEPHONE NUMBER H5730UD(SYLVANIA)	----------
A18	B	LABEL, TELEPHONE NUMBER H7931UD(EMERSON)	----------
A20	A	PANEL, TRAY H9400UD	0VM203907
A20	B	PANEL, TRAY H9410UD	0VM101245
1B1	A	DECK ASSEMBLY CZD012/VM1660	N1660FL
1B1	B	DECK ASSEMBLY CZD012/VM1640	N1640FL
1B2		DVD MECHA 0838 VCDVM040	N79F0GVM
2B1		DECK PEDESTAL-1 H9400UD	0VM101201-1
2B2		TOP BRACKET H9100UD	0VM203252A
2B3		SIDE BRACKET H9100UD	0VM305013
2B6		DECK PEDESTAL-2 H9400UD	0VM101201-2
2B7		DECK PEDESTAL-3 H9400UD	0VM101201-3
2B16		TAPE, HIMELON H9206JD	0VM413956
2B18		FIBER, TOP CASE HC460ED	0VM412906
2B40		INSULATOR H9400UD	0VM305872
2L011		SCREW, S-TIGHT M3X8 BIND + CHROME	GBMS3080
2L012		SCREW, S-TIGHT M3X8 BIND + CHROME	GBMS3080
2L021		SCREW, S-TIGHT M3X26 H9400UD	0VM414507
2L031		SCREW, S-TIGHT M3X5 BIND HEAD+	GBMS3050
2L032		SCREW, S-TIGHT M3X5 BIND HEAD+	GBMS3050
2L033		SCREW, S-TIGHT M3X5 BIND HEAD+	GBMS3050
2L034		SCREW, S-TIGHT M3X6 BIND HEAD+	GBMS3060
2L041		SCREW, C-TIGHT M3X5 BIND HEAD +	GBCC3050
2L051		SCREW, P-TIGHT M3X6 BIND HEAD+	GBMP3060
2L052		SCREW, P-TIGHT M3X6 BIND HEAD+	GBMP3060
2L054		SCREW, P-TIGHT M3X6 BIND HEAD+	GBMP3060
2L055	B	SCREW, P-TIGHT M3X6 BIND HEAD+	GBMP3060
2L061		SCREW, B-TIGHT M3X8 BIND HEAD +	GBKB3080
2L062		SCREW, B-TIGHT M3X8 BIND HEAD +	GBKB3080
2L071		SCREW, P-TIGHT M3X10 WASHER HEAD+	GCMP3100
2L081		SCREW, S-TIGHT M3X5 BIND HEAD +	GBKS3050
2L082		SCREW, S-TIGHT M3X5 BIND HEAD +	GBKS3050
2L091		SCREW, P-TIGHT M3X8 BIND HEAD+	GBCP3080
		PACKING	
S1	A	GIFT BOX CARTON H9400UD	0VM306059
S1	B	GIFT BOX CARTON H9410UD	0VM306061
S2		STYROFOAM(2) H9100UD	0VM203377C
S3		UNIT, BAG E5500UD	0VM411683
		ACCESSORIES	
X1		REMOTE CONTROL UNIT 364/CRC007 or	NA209UD
		REMOTE CONTROL UNIT 364/CRC007	NA259UD
X2		DRY BATTERY ES-GR6M-C or	XB0M571GLP01
		DRY BATTERY R6P/2S	XB0M451T0001
X3		RF CABLE 2.5C-2V	WPZ0901TM002
X4		ACCESSORY BAG H3600UD T=0.03	0VM409454
X5		AV CORD RCA(M*2)TO RCA(M*2) or	WPZ0102LTE01
		AV CORD TSCKA-Y/RW100	WPZ0102TM015
X20⚠	A	OWNER'S MANUAL H9400UD	0VMN03452
X20⚠	B	OWNER'S MANUAL H9410UD	0VMN03468
X36	A	RETURN STOP SHEET H9400UD	0VM414831
X36	B	RETURN STOP SHEET H9410UD	0VM414898

ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTES:

1. Parts that are not assigned part numbers (---------) are not available.
2. Tolerance of Capacitors and Resistors are noted with the following symbols.

C.....±0.25%	D.....±0.5%	F.....±1%
G.....±2%	J.....±5%	K.....±10%
M.....±20%	N.....±30%	Z.....+80/-20%

3. LED Type (DVC860D):
   When it is necessary to replace one or more of the following diodes, all four should be replaced: D564, D565, D566 and D567 on the Main CBA.
   LED Type (EWD2203):
   When it is necessary to replace one or more of the following diodes, all six should be replaced: D564, D565, D566, D567, D2001 and D2002 on the Main CBA.

Comparison Chart of Models and Marks

Model	Mark
DVC860D	A
EWD2203	B

DVD MAIN CBA UNIT

Ref. No.	Mark	Description	Part No.
	A B	DVD MAIN CBA UNIT DVD MAIN CBA UNIT	N79FMGUP N79FNGUP

MCV CBA

Ref. No.	Mark	Description	Part No.
	A B	MCV CBA MCV CBA Consists of the following	0VSA13628 0VSA13652
	B	MAIN CBA (MCV-A) FUNCTION CBA (MCV-B) DVD OP/CL CBA(MCV-C) DVD SW CBA(MCV-D) SENSOR CBA	---------- ---------- ---------- ---------- 0VSA13627

MAIN CBA

Ref. No.	Mark	Description	Part No.
		MAIN CBA(MCV-A) Consists of the following	----------
		CAPACITORS	
C023		ELECTROLYTIC CAP. 100µF/25V M or	CE1EMASDL101
		ELECTROLYTIC CAP. 100µF/25V M	CE1EMASTL101
C051		ELECTROLYTIC CAP. 10µF/16V M H7	CE1CMAVSL100
C053		ELECTROLYTIC CAP. 100µF/6.3V M or	CE0KMASDL101
		ELECTROLYTIC CAP. 100µF/6.3V M	CE0KMASTL101
C060		CERAMIC CAP.(AX) B K 0.1µF/25V	CCA1EKT0B104
C253		ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C255		CHIP CERAMIC CAP.(MELF) F Z 0.01µF/16V or	CZM1CZ30F103
		CHIP CERAMIC CAP.(MELF) F Z 0.01µF/16V	CZM1CZB0F103
C256		ELECTROLYTIC CAP. 47µF/6.3V M H7	CE0KMAVSL470
C257		CHIP CERAMIC CAP. F Z 0.1µF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1µF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1µF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1µF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C308		ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C309		ELECTROLYTIC CAP. 47µF/6.3V M H7	CE0KMAVSL470
C310		CHIP CERAMIC CAP. F Z 0.1µF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1µF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1µF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1µF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C311		CHIP CERAMIC CAP. CG J 390pF/50V or	CHD1JJ3CG391
		CHIP CERAMIC CAP. CH J 390pF/50V or	CHD1JJ3CH391
		CHIP CERAMIC CAP. CH J 390pF/50V	CHD1JJBCH391
C312		ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C314		CHIP CERAMIC CAP.(MELF) SL J 100pF/50V or	CZM1JJ3SL101
		CHIP CERAMIC CAP.(MELF) SL J 100pF/50V	CZM1JJBSL101
C315		CHIP CERAMIC CAP.(MELF) SL J 100pF/50V or	CZM1JJ3SL101
		CHIP CERAMIC CAP.(MELF) SL J 100pF/50V	CZM1JJBSL101
C320		ELECTROLYTIC CAP. 22µF/6.3V M H7	CE0KMAVSL220
C321		ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C322		ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C324		ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C325		ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C326		ELECTROLYTIC CAP. 22µF/6.3V M H7	CE0KMAVSL220
C328	A	CHIP CERAMIC CAP.(MELF) F Z 0.01µF/16V or	CZM1CZ30F103
	A	CHIP CERAMIC CAP.(MELF) F Z 0.01µF/16V	CZM1CZB0F103
C329		CHIP CERAMIC CAP.(MELF) F Z 0.01µF/16V or	CZM1CZ30F103
		CHIP CERAMIC CAP.(MELF) F Z 0.01µF/16V	CZM1CZB0F103
C330		CHIP CERAMIC CAP.(MELF) F Z 0.01µF/16V or	CZM1CZ30F103
		CHIP CERAMIC CAP.(MELF) F Z 0.01µF/16V	CZM1CZB0F103
C332		CHIP CERAMIC CAP. B K 0.01µF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01µF/50V	CHD1JKB0B103
C333		ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMAVSL1R0
C335		CHIP CERAMIC CAP. F Z 0.1µF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1µF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1µF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1µF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZ3FZ104
C336		CHIP CERAMIC CAP. B K 0.047µF/25V or	CHD1EK30B473

Ref. No.	Mark	Description	Part No.
		CHIP CERAMIC CAP. B K 0.047μF/25V or	CHD1EKB0B473
		CHIP CERAMIC CAP. B K 0.047μF/50V or	CHD1JK30B473
		CHIP CERAMIC CAP. B K 0.047μF/50V	CHD1JKB0B473
C337		ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C339		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C340		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C341		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C344		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C345		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C346		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C347		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C348		CHIP CERAMIC CAP. B K 0.047μF/25V or	CHD1EK30B473
		CHIP CERAMIC CAP. B K 0.047μF/25V or	CHD1EKB0B473
		CHIP CERAMIC CAP. B K 0.047μF/50V or	CHD1JK30B473
		CHIP CERAMIC CAP. B K 0.047μF/50V	CHD1JKB0B473
C349		CHIP CERAMIC CAP. B K 0.047μF/25V or	CHD1EK30B473
		CHIP CERAMIC CAP. B K 0.047μF/25V or	CHD1EKB0B473
		CHIP CERAMIC CAP. B K 0.047μF/50V or	CHD1JK30B473
		CHIP CERAMIC CAP. B K 0.047μF/50V	CHD1JKB0B473
C352		CHIP CERAMIC CAP. B K 0.047μF/25V or	CHD1EK30B473
		CHIP CERAMIC CAP. B K 0.047μF/25V or	CHD1EKB0B473
		CHIP CERAMIC CAP. B K 0.047μF/50V or	CHD1JK30B473
		CHIP CERAMIC CAP. B K 0.047μF/50V	CHD1JKB0B473
C353		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C354	A	CHIP CERAMIC CAP. CG J 68pF/50V or	CHD1JJ3CG680
	A	CHIP CERAMIC CAP. CH J 68pF/50V or	CHD1JJ3CH680
	A	CHIP CERAMIC CAP. CH J 68pF/50V	CHD1JJBCH680
C391		ELECTROLYTIC CAP. 100μF/10V M H7	CE1AMAVSL101
C392		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
		ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C401		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C402	B	CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
	B	CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
	B	CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
	B	CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
	B	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C403	B	CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
	B	CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
	B	CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
	B	CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
	B	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C404		ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C405		ELECTROLYTIC CAP. 33μF/6.3V M H7	CE0KMAVSL330
C406		CHIP CERAMIC CAP.(MELF) F Z 0.01μF/ 16V or	CZM1CZ30F103
		CHIP CERAMIC CAP.(MELF) F Z 0.01μF/ 16V	CZM1CZB0F103
C408		ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C409	A	CHIP CERAMIC CAP.(MELF) Y K 6800pF/ 16V or	CZM1CK30Y682
	A	CHIP CERAMIC CAP.(MELF) Y K 6800pF/ 16V	CZM1CKB0Y682
C409	B	CHIP CERAMIC CAP.(MELF) Y K 4700pF/ 16V or	CZM1CK30Y472
	B	CHIP CERAMIC CAP.(MELF) Y K 4700pF/ 16V	CZM1CKB0Y472

Ref. No.	Mark	Description	Part No.
C410		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C411		CHIP CERAMIC CAP.(MELF) Y K 2200pF/ 35V or	CZM1GK30Y222
		CHIP CERAMIC CAP.(MELF) Y K 2200pF/ 35V	CZM1GKB0Y222
C411	A	CHIP CERAMIC CAP. B K 2200pF/50V or	CHD1JK30B222
	A	CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JKB0B222
C413		CHIP CERAMIC CAP. B K 0.012μF/50V or	CHD1JK30B123
		CHIP CERAMIC CAP. B K 0.012μF/50V	CHD1JKB0B123
C415		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C417		CHIP CERAMIC CAP.(MELF) Y K 1000pF/ 35V or	CZM1GK30Y102
		CHIP CERAMIC CAP.(MELF) Y K 1000pF/ 35V	CZM1GKB0Y102
C418		CHIP CERAMIC CAP. B K 2700pF/50V or	CHD1JK30B272
		CHIP CERAMIC CAP. B K 2700pF/50V	CHD1JKB0B272
C419		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C421		ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C422		ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C423		ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMAVSL221
C424		CERAMIC CAP. B K 470pF/100V	CCD2AKS0B471
C425		FILM CAP.(P) 0.018μF/100V J or	CMA2AJS00183
		FILM CAP.(P) 0.018μF/50V J	CA1J183MS029
C440	A	ELECTROLYTIC CAP. 0.1μF/50V M H7	CE1JMAVSLR10
C441	A	ELECTROLYTIC CAP. 0.1μF/50V M H7	CE1JMAVSLR10
C448	A	ELECTROLYTIC CAP. 4.7μF/50V M H7	CE1JMAVSL4R7
C449	A	ELECTROLYTIC CAP. 4.7μF/50V M H7	CE1JMAVSL4R7
C451	A	ELECTROLYTIC CAP. 47μF/16V M H7	CE1CMAVSL470
C452	A	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C453	A	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C454	A	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C455	A	ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C456	A	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C457	A	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C458	A	CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
	A	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C459	A	ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C460	A	CHIP CERAMIC CAP.(MELF) Y K 4700pF/ 16V or	CZM1CK30Y472
	A	CHIP CERAMIC CAP.(MELF) Y K 4700pF/ 16V	CZM1CKB0Y472
C461	A	CHIP CERAMIC CAP.(MELF) F Z 0.01μF/ 16V or	CZM1CZ30F103
	A	CHIP CERAMIC CAP.(MELF) F Z 0.01μF/ 16V	CZM1CZB0F103
C462	A	CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
	A	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C463	A	CHIP CERAMIC CAP. B K 0.1μF/16V or	CHD1CK30B104
	A	CHIP CERAMIC CAP. B K 0.1μF/16V or	CHD1CKB0B104
	A	CHIP CERAMIC CAP. B K 0.1μF/25V or	CHD1EK30B104
	A	CHIP CERAMIC CAP. B K 0.1μF/25V	CHD1EKB0B104
C465	A	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C466	A	ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMAVSL221
C467	A	CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EK30B223
	A	CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EKB0B223
	A	CHIP CERAMIC CAP. B K 0.022μF/50V or	CHD1JK30B223
	A	CHIP CERAMIC CAP. B K 0.022μF/50V	CHD1JKB0B223
C470	A	CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZTFZ104

Ref. No.	Mark	Description	Part No.
C471	A	ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C472	A	CHIP CERAMIC CAP.(MELF) Y K 4700pF/ 16V or	CZM1CK30Y472
	A	CHIP CERAMIC CAP.(MELF) Y K 4700pF/ 16V	CZM1CKB0Y472
C473	A	CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
	A	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C474	A	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C475	A	ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C476	A	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C477	A	ELECTROLYTIC CAP. 2.2μF/50V M H7	CE1JMAVSL2R2
C478	A	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C479	A	CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EK30B223
	A	CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EKB0B223
	A	CHIP CERAMIC CAP. B K 0.022μF/50V or	CHD1JK30B223
	A	CHIP CERAMIC CAP. B K 0.022μF/50V	CHD1JKB0B223
C480	A	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C481	A	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C483	A	CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
	A	CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
	A	CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
	A	CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
	A	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C484	A	ELECTROLYTIC CAP. 2.2μF/50V M H7	CE1JMAVSL2R2
C485	A	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C486	A	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C487	A	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C488	A	CHIP CERAMIC CAP. F Z 1μF/10V or	CHD1AZ30F105
	A	CHIP CERAMIC CAP. F Z 1μF/10V	CHD1AZB0F105
C489	A	ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C491	A	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C492	A	ELECTROLYTIC CAP. 22μF/16V M H7	CE1CMAVSL220
C493	A	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C494	A	ELECTROLYTIC CAP. 22μF/16V M H7	CE1CMAVSL220
C495	A	CHIP CERAMIC CAP.(MELF) F Z 0.01μF/ 16V or	CZM1CZ30F103
	A	CHIP CERAMIC CAP.(MELF) F Z 0.01μF/ 16V	CZM1CZB0F103
C496	A	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C498	A	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C499	A	ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMAVSL4R7
C502		ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMAVSL221
C505		ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMAVSL220
C507		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C508		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EK30B223
		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EKB0B223
		CHIP CERAMIC CAP. B K 0.022μF/50V or	CHD1JK30B223
		CHIP CERAMIC CAP. B K 0.022μF/50V	CHD1JKB0B223
C509		ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMAVSL221
C513		CHIP CERAMIC CAP. CG D 10pF/50V or	CHD1JD3CG100
		CHIP CERAMIC CAP. CH D 10pF/50V or	CHD1JD3CH100
		CHIP CERAMIC CAP. CH D 10pF/50V or	CHD1JDBCH100
		CHIP CERAMIC CAP.(MELF) SL D 10pF/ 50V or	CZM1JD3SL100
		CHIP CERAMIC CAP.(MELF) SL D 10pF/ 50V	CZM1JDBSL100
C514		CHIP CERAMIC CAP. CG J 22pF/50V or	CHD1JJ3CG220
		CHIP CERAMIC CAP. CH J 22pF/50V or	CHD1JJ3CH220
		CHIP CERAMIC CAP. CH J 22pF/50V or	CHD1JJBCH220
		CHIP CERAMIC CAP.(MELF) SL J 22pF/ 50V or	CZM1JJ3SL220
		CHIP CERAMIC CAP.(MELF) SL J 22pF/ 50V	CZM1JJBSL220

Ref. No.	Mark	Description	Part No.
C515		CHIP CERAMIC CAP. CG J 18pF/50V or	CHD1JJ3CG180
		CHIP CERAMIC CAP. CH J 18pF/50V or	CHD1JJ3CH180
		CHIP CERAMIC CAP. CH J 18pF/50V or	CHD1JJBCH180
		CHIP CERAMIC CAP.(MELF) SL J 18pF/ 50V or	CZM1JJ3SL180
		CHIP CERAMIC CAP.(MELF) SL J 18pF/ 50V	CZM1JJBSL180
C521		ELECTROLYTIC CAP. 47μF/25V M H7	CE1EMAVSL470
C522		CHIP CERAMIC CAP. B K 4700pF/50V or	CHD1JK30B472
		CHIP CERAMIC CAP. B K 4700pF/50V	CHD1JKB0B472
C523		CHIP CERAMIC CAP.(MELF) SL J 100pF/ 50V or	CZM1JJ3SL101
		CHIP CERAMIC CAP.(MELF) SL J 100pF/ 50V	CZM1JJBSL101
C525		CHIP CERAMIC CAP. B K 4700pF/50V or	CHD1JK30B472
		CHIP CERAMIC CAP. B K 4700pF/50V	CHD1JKB0B472
C527		CHIP CERAMIC CAP. B K 0.047μF/25V or	CHD1EK30B473
		CHIP CERAMIC CAP. B K 0.047μF/25V or	CHD1EKB0B473
		CHIP CERAMIC CAP. B K 0.047μF/50V or	CHD1JK30B473
		CHIP CERAMIC CAP. B K 0.047μF/50V	CHD1JKB0B473
C529		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EK30B223
		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EKB0B223
		CHIP CERAMIC CAP. B K 0.022μF/50V or	CHD1JK30B223
		CHIP CERAMIC CAP. B K 0.022μF/50V	CHD1JKB0B223
C530		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C531		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C532		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C533		ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMAVSL470
C534		CHIP CERAMIC CAP. B K 0.1μF/16V or	CHD1CK30B104
		CHIP CERAMIC CAP. B K 0.1μF/16V or	CHD1CKB0B104
		CHIP CERAMIC CAP. B K 0.1μF/25V or	CHD1EK30B104
		CHIP CERAMIC CAP. B K 0.1μF/25V	CHD1EKB0B104
C535		ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMAVSL220
C536		CHIP CERAMIC CAP. B K 1000pF/50V or	CHD1JK30B102
		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C537		CHIP CERAMIC CAP. B K 1000pF/50V or	CHD1JK30B102
		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C540		CHIP CERAMIC CAP.(MELF) F Z 0.01μF/ 16V or	CZM1CZ30F103
		CHIP CERAMIC CAP.(MELF) F Z 0.01μF/ 16V	CZM1CZB0F103
C550	A	ELECTROLYTIC CAP. 22μF/50V M H7	CE1JMAVSL220
C571	A	CHIP CERAMIC CAP. B K 0.1μF/16V or	CHD1CK30B104
	A	CHIP CERAMIC CAP. B K 0.1μF/16V or	CHD1CKB0B104
	A	CHIP CERAMIC CAP. B K 0.1μF/25V or	CHD1EK30B104
	A	CHIP CERAMIC CAP. B K 0.1μF/25V	CHD1EKB0B104
C572	A	ELECTROLYTIC CAP. 100μF/6.3V H7	CE0KMAVSL101
C574	A	CHIP CERAMIC CAP. B K 4700pF/50V or	CHD1JK30B472
	A	CHIP CERAMIC CAP. B K 4700pF/50V	CHD1JKB0B472
C701	A	ELECTROLYTIC CAP. 0.47μF/50V M or	CE1JMASDLR47
	A	ELECTROLYTIC CAP. 0.47μF/50V M	CE1JMASTLR47
C701	B	ELECTROLYTIC CAP. 4.7μF/50V M or	CE1JMASDL4R7
	B	ELECTROLYTIC CAP. 4.7μF/50V M	CE1JMASTL4R7
C702	B	CHIP CERAMIC CAP. B K 2200pF/50V or	CHD1JK30B222
	B	CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JKB0B222
C703		ELECTROLYTIC CAP. 100μF/6.3V M or	CE0KMASDL101
		ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASTL101
C704		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C707	B	FILM CAP.(P) 0.039μF/50V J or	CA1J393MS029

Ref. No.	Mark	Description	Part No.
	B	FILM CAP.(P) 0.039μF/50V J	CMA1JJS00393
C708		ELECTROLYTIC CAP. 0.22μF/50V M or	CE1JMASDLR22
		ELECTROLYTIC CAP. 0.22μF/50V M	CE1JMASTLR22
C709		ELECTROLYTIC CAP. 1μF/50V M or	CE1JMASDL1R0
		ELECTROLYTIC CAP. 1μF/50V M	CE1JMASTL1R0
C751		CHIP CERAMIC CAP.(MELF) Y K 2200pF/ 35V or	CZM1GK30Y222
		CHIP CERAMIC CAP.(MELF) Y K 2200pF/ 35V	CZM1GKB0Y222
C751	A	CHIP CERAMIC CAP. B K 2200pF/50V or	CHD1JK30B222
	A	CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JKB0B222
C752		CHIP CERAMIC CAP.(MELF) Y K 2200pF/ 35V or	CZM1GK30Y222
		CHIP CERAMIC CAP.(MELF) Y K 2200pF/ 35V	CZM1GKB0Y222
C752	A	CHIP CERAMIC CAP. B K 2200pF/50V or	CHD1JK30B222
	A	CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JKB0B222
C762	A	ELECTROLYTIC CAP. 4.7μF/50V M H7	CE1JMAVSL4R7
C762	B	ELECTROLYTIC CAP. 4.7μF/50V M H7	CE1JMASSL4R7
C766		CHIP CERAMIC CAP.(MELF) F Z 0.01μF/ 16V or	CZM1CZ30F103
		CHIP CERAMIC CAP.(MELF) F Z 0.01μF/ 16V	CZM1CZB0F103
C772		ELECTROLYTIC CAP. 4.7μF/50V M H7	CE1JMASSL4R7
C773		ELECTROLYTIC CAP. 4.7μF/50V M H7	CE1JMASSL4R7
C777	A	ELECTROLYTIC CAP. 4.7μF/50V M H7	CE1JMAVSL4R7
C777	B	ELECTROLYTIC CAP. 4.7μF/50V M H7	CE1JMASSL4R7
C780	B	ELECTROLYTIC CAP. 4.7μF/50V M H7	CE1JMAVSL4R7
C781	B	ELECTROLYTIC CAP. 4.7μF/50V M H7	CE1JMAVSL4R7
C1015		ELECTROLYTIC CAP. 220μF/6.3V M or	CE0KMASDL221
		ELECTROLYTIC CAP. 220μF/6.3V M	CE0KMASTL221
C1038		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
		ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1039		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C1040		ELECTROLYTIC CAP. 100μF/6.3V H7	CE0KMAVSL101
C1042		ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMAVSL221
C1070		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JKB0B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C1071		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JKB0B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C1201		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C1202		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C1205		CHIP CERAMIC CAP. CG J 220pF/50V or	CHD1JJ3CG221
		CHIP CERAMIC CAP. CH J 220pF/50V or	CHD1JJ3CH221
		CHIP CERAMIC CAP. CH J 220pF/50V	CHD1JJBCH221
C1206		CHIP CERAMIC CAP. CG J 220pF/50V or	CHD1JJ3CG221
		CHIP CERAMIC CAP. CH J 220pF/50V or	CHD1JJ3CH221
		CHIP CERAMIC CAP. CH J 220pF/50V	CHD1JJBCH221
C1207		CHIP CERAMIC CAP. CG J 47pF/50V or	CHD1JJ3CG470
		CHIP CERAMIC CAP. CH J 47pF/50V or	CHD1JJ3CH470
		CHIP CERAMIC CAP. CH J 47pF/50V	CHD1JJBCH470
C1208		CHIP CERAMIC CAP. CG J 47pF/50V or	CHD1JJ3CG470
		CHIP CERAMIC CAP. CH J 47pF/50V or	CHD1JJ3CH470
		CHIP CERAMIC CAP. CH J 47pF/50V	CHD1JJBCH470
C1221		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C1222		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C1223		CHIP CERAMIC CAP. B K 1000pF/50V or	CHD1JK30B102
		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C1224		CHIP CERAMIC CAP. B K 1000pF/50V or	CHD1JK30B102

Ref. No.	Mark	Description	Part No.
		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C1245		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C1246		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C1247		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
		ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1249		ELECTROLYTIC CAP. 47μF/16V M H7	CE1CMAVSL470
C1350		CHIP CERAMIC CAP. B K 0.47μF/10V or	CHD1AKB0B474
		CHIP CERAMIC CAP. B K 0.47μF/10V	CHD1AK30B474
C1351		CHIP CERAMIC CAP. B K 0.1μF/16V or	CHD1CK30B104
		CHIP CERAMIC CAP. B K 0.1μF/16V or	CHD1CKB0B104
		CHIP CERAMIC CAP. B K 0.1μF/25V or	CHD1EK30B104
		CHIP CERAMIC CAP. B K 0.1μF/25V	CHD1EKB0B104
C1353		CHIP CERAMIC CAP. B K 0.47μF/10V or	CHD1AKB0B474
		CHIP CERAMIC CAP. B K 0.47μF/10V	CHD1AK30B474
C1354		CHIP CERAMIC CAP. CG J 100pF/50V or	CHD1JJ3CG101
		CHIP CERAMIC CAP. CH J 100pF/50V or	CHD1JJ3CH101
		CHIP CERAMIC CAP. CH J 100pF/50V	CHD1JJBCH101
C1355		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
C1358		CHIP CERAMIC CAP. CH D 9pF/50V or	CHD1JD3CH9R0
		CHIP CERAMIC CAP. CH D 9pF/50V	CHD1JDBCH9R0
C1394		ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMASSL470
C1395		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
		ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1402		PCB JUMPER D0.6-P5.0	JW5.0T
C1421		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C1422		CHIP CERAMIC CAP. B K 0.1μF/16V or	CHD1CK30B104
		CHIP CERAMIC CAP. B K 0.1μF/16V or	CHD1CKB0B104
		CHIP CERAMIC CAP. B K 0.1μF/25V or	CHD1EK30B104
		CHIP CERAMIC CAP. B K 0.1μF/25V	CHD1EKB0B104
C1441		CHIP CERAMIC CAP. B K 0.33μF/10V or	CHD1AK30B334
		CHIP CERAMIC CAP. B K 0.33μF/10V	CHD1AKB0B334
C1442		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
		ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1461		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C1462		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
		ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1481		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMAVSL1R0
C1482		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASDL471
		ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C1523		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
C1524		ELECTROLYTIC CAP. 100μF/6.3V H7	CE0KMAVSL101
C1531		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C1532		ELECTROLYTIC CAP. 22μF/6.3V M H7	CE0KMAVSL220
C2002		CHIP CERAMIC CAP. B K 1000pF/50V or	CHD1JK30B102
		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C2004		ELECTROLYTIC CAP. 100μF/6.3V H7	CE0KMAVSL101

Ref. No.	Mark	Description	Part No.
C2012		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZ3FZ104
CONNECTORS			
CN1001		FMN CONNECTOR, SIDE 22P 22FMN-STRK	JCFNG22JG004
CN1003		CONNECTOR BASE, 15P TUC-P15P-B1	J3TUA15TG001
CN1601		FMN CONNECTOR, TOP 16P 16FMN-BTK	JCFNG16JG001
CN2001		FMN CONNECTOR, TOP 4P 04FMN-BTRK	JCFNG04JG002
DIODES			
D019		RECTIFIER DIODE RL201	NDQZ000RL201
D052		ZENER DIODE DZ-10BSBT265 or	NDTB00DZ10BS
		ZENER DIODE MTZJT-7710B	QDTB00MTZJ10
D071		PCB JUMPER D0.6-P7.5	JW7.5T
D080		RECTIFIER DIODE 1N4005	NDQZ001N4005
D081		RECTIFIER DIODE 1N4005	NDQZ001N4005
D100		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D101		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1030		PCB JUMPER D0.6-P5.0	JW5.0T
D1035		RECTIFIER DIODE 1N4005	NDQZ001N4005
D1036		RECTIFIER DIODE 1N4005	NDQZ001N4005
D1037		RECTIFIER DIODE 1N4005	NDQZ001N4005
D1038		SCHOTTKY BARRIER DIODE ERB81-004 or	AERB81004***
		SCHOTTKY BARRIER DIODE SB140	NDQZ000SB140
D1040		PCB JUMPER D0.6-P7.5	JW7.5T
D1041		PCB JUMPER D0.6-P10.0	JW10.0T
D1058		RECTIFIER DIODE 1N4005	NDQZ001N4005
D1301		ZENER DIODE DZ-5.6BSBT265 or	NDTB0DZ5R6BS
		ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D2010		PCB JUMPER D0.6-P5.0	JW5.0T
D501		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D502	A	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	A	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D510	A	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	A	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D555		LED MIE-534A2 or	NPZZM1E534A2
		LED SIR-563ST3F P or	QPQPS1R563ST
		LED SIR-563ST3F Q	QPQQS1R563ST
D701		ZENER DIODE DZ-33BSDT265 or	NDTD00DZ33BS
		ZENER DIODE MTZJT-7733D	QDTD00MTZJ33
D702		ZENER DIODE DZ-6.8BSBT265 or	NDTB0DZ6R8BS
		ZENER DIODE MTZJT-776.8B	QDTB0MTZJ6R8
LED EXCLUSIVE(A)			
D564		LED(RED) 204HD/E	NPQZ00204HDE
D565		LED(RED) 204HD/E	NPQZ00204HDE
D566		LED(GREEN) 204-10GD/S957	NPQZ10GDS957
D567		LED(GREEN) 204-10GD/S957	NPQZ10GDS957
D2001	B	LED(GREEN) 204-10GD/S957	NPQZ10GDS957
D2002	B	LED(GREEN) 204-10GD/S957	NPQZ10GDS957
LED EXCLUSIVE(B)			
D564		LED(RED) LTL-4211N	NPQZLTL4211N
D565		LED(RED) LTL-4211N	NPQZLTL4211N
D566		LED(GREEN) LTL-4231N	NPQZLTL4231N
D567		LED(GREEN) LTL-4231N	NPQZLTL4231N

Ref. No.	Mark	Description	Part No.
D2001	B	LED(GREEN) LTL-4231N	NPQZLTL4231N
D2002	B	LED(GREEN) LTL-4231N	NPQZLTL4231N
ICS			
IC301		IC:Y/C/A LA71091M	QSZBA0RSY012
IC451	A	IC:HIFI LA72670M	QSZBA0RSY034
IC501		MICROCONTROLLER 8BIT MN101D08EFD1	QSZAB0RMS006
IC571	A	FL DRIVER IC PT6313-S-TP	NSZBA0TG2006
IC751		IC:SWITCH BU4053BCF or	QSMDA0SRM010
		IC:SWITCH TC4053BF(N)	QSMBA0STS002
IC1002		VOLTAGE REGULATOR PQ070XF01SZ	QSZBA0SSH026
IC1004		VOLTAGE REGULATOR PQ070XF01SZ	QSZBA0SSH026
IC1201		IC:OP AMP KIA4558P or	NSZBA0SJY004
		IC:OP AMP NJM4558D	QSZBA0SJR006
IC1402		DRIVER FOR DVD MM1622XJBE	QSZBA0TMM085
COILS			
L251		INDUCTOR 22μH-K-26T	LLAXKATTU220
L303		INDUCTOR 100μH-K-26T	LLAXKATTU101
L304		CHOKE COIL 47μH-K	LLBD00PKV007
L421		INDUCTOR 47μH-K-5FT	LLARKBSTU470
L422		PCB JUMPER D0.6-P5.0	JW5.0T
L451	A	PCB JUMPER D0.6-P5.0	JW5.0T
L501		PCB JUMPER D0.6-P5.0	JW5.0T
L502		CHOKE COIL 47μH-K	LLBD00PKV007
L503		INDUCTOR 12μH-K-26T	LLAXKATTU120
L701		INDUCTOR 4.7μH-K-26T	LLAXKATTU4R7
L1009		PCB JUMPER D0.6-P5.0	JW5.0T
L1010		PCB JUMPER D0.6-P5.0	JW5.0T
L1350		INDUCTOR 100μH-K-26T	LLAXKATTU101
L1351		INDUCTOR 0.47μH-K-26T	LLAXKATTUR47
L1401		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
L1441		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
L1442		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
L1461		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
L1481		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
L1521		INDUCTOR 47μH-K-5FT	LLARKBSTU470
L2001		INDUCTOR 100μH-K-26T	LLAXKATTU101
TRANSISTORS			
Q052		RES. BUILT-IN TRANSISTOR BA1F4M-T or	QQSZ00BA1F4M
		RES. BUILT-IN TRANSISTOR KRC103M	NQSZ0KRC103M
Q055		TRANSISTOR 2SC536NF-NPA-AT or	QQSFC536NNPA
		TRANSISTOR 2SC536NG-NPA-AT or	QQSGC536NNPA
		TRANSISTOR KTC3198(GR) or	NQS40KTC3198
		TRANSISTOR KTC3198(Y)	NQSY0KTC3198
Q056		TRANSISTOR 2SC2120-Y(TPE2) or	QQSY02SC2120
		TRANSISTOR KTC3203(Y)	NQSY0KTC3203
Q057		TRANSISTOR 2SC1815-BL(TPE2) or	QQS202SC1815
		TRANSISTOR 2SC2785(K) or	QQSK02SC2785
		TRANSISTOR KTC3199(BL)	NQS50KTC3199
Q301		TRANSISTOR 2SA1015-GR(TPE2) or	QQS102SA1015
		TRANSISTOR KTA1266(GR)	NQS40KTA1266
Q302		TRANSISTOR KTC3193(Y)	NQSY0KTC3193
Q303		TRANSISTOR KTC3193(Y)	NQSY0KTC3193
Q391		TRANSISTOR 2SA1015-GR(TPE2) or	QQS102SA1015
		TRANSISTOR KTA1266(GR)	NQS40KTA1266

Ref. No.	Mark	Description	Part No.
Q421		TRANSISTOR 2SA1015-GR(TPE2) or	QQS102SA1015
		TRANSISTOR KTA1266(GR)	NQS40KTA1266
Q422		TRANSISTOR 2SC2120-Y(TPE2) or	QQSY02SC2120
		TRANSISTOR KTC3203(Y)	NQSY0KTC3203
Q423		TRANSISTOR 2SC536NF-NPA-AT or	QQSFC536NNPA
		TRANSISTOR 2SC536NG-NPA-AT or	QQSGC536NNPA
		TRANSISTOR KTC3198(GR) or	NQS40KTC3198
		TRANSISTOR KTC3198(Y)	NQSY0KTC3198
Q424		TRANSISTOR 2SC536NF-NPA-AT or	QQSFC536NNPA
		TRANSISTOR 2SC536NG-NPA-AT or	QQSGC536NNPA
		TRANSISTOR KTC3198(GR) or	NQS40KTC3198
		TRANSISTOR KTC3198(Y)	NQSY0KTC3198
Q425		RES. BUILT-IN TRANSISTOR BN1F4M-T or	QQSZ00BN1F4M
		RES. BUILT-IN TRANSISTOR KRA103M	NQSZ0KRA103M
Q501		TRANSISTOR 2SC1815-BL(TPE2) or	QQS202SC1815
		TRANSISTOR 2SC2785(K) or	QQSK02SC2785
		TRANSISTOR KTC3199(BL)	NQS50KTC3199
Q506		PHOTO TRANSISTOR MID-32A22 or	NPWZM1D32A22
		PHOTO TRANSISTOR PT204-6B-12	NPWZT2046B12
Q563		TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q565		TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q566		TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q567		TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q760		RES. BUILT-IN TRANSISTOR BA1F4M-T or	QQSZ00BA1F4M
		RES. BUILT-IN TRANSISTOR KRC103M	NQSZ0KRC103M
Q762	B	TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
	B	TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
	B	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	B	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	B	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	B	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	B	TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q763	B	TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
	B	TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
	B	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	B	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	B	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	B	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	B	TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q1004		TRANSISTOR 2SC2120-Y(TPE2) or	QQSY02SC2120
		TRANSISTOR KTC3203(Y)	NQSY0KTC3203
Q1005		TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q1006		TRANSISTOR 2SA1175(F) or	QQSF02SA1175
		TRANSISTOR 2SA1175(H) or	QQSH02SA1175
		TRANSISTOR 2SA1175(J) or	QQSJ02SA1175
		TRANSISTOR KTA1267(GR) or	NQS10KTA1267
		TRANSISTOR KTA1267(Y)	NQSY0KTA1267
Q1011		TRANSISTOR 2SC2120-Y(TPE2) or	QQSY02SC2120
		TRANSISTOR KTC3203(Y)	NQSY0KTC3203
Q1201		TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q1202		TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q1203		TRANSISTOR 2SA1015-GR(TPE2) or	QQS102SA1015
		TRANSISTOR KTA1266(GR)	NQS40KTA1266
Q1204		TRANSISTOR 2SA1015-GR(TPE2) or	QQS102SA1015
		TRANSISTOR KTA1266(GR)	NQS40KTA1266
Q1351		TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q1385		TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q2001		RES. BUILT-IN TRANSISTOR BA1F4M-T or	QQSZ00BA1F4M
		RES. BUILT-IN TRANSISTOR KRC103M	NQSZ0KRC103M
Q2002	B	TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
	B	TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
	B	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	B	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	B	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	B	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	B	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	B	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	B	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	B	TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q1004		TRANSISTOR 2SC2120-Y(TPE2) or	QQSY02SC2120
		TRANSISTOR KTC3203(Y)	NQSY0KTC3203
Q1005		TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q1006		TRANSISTOR 2SA1175(F) or	QQSF02SA1175
		TRANSISTOR 2SA1175(H) or	QQSH02SA1175
		TRANSISTOR 2SA1175(J) or	QQSJ02SA1175
		TRANSISTOR KTA1267(GR) or	NQS10KTA1267
		TRANSISTOR KTA1267(Y)	NQSY0KTA1267
Q1011		TRANSISTOR 2SC2120-Y(TPE2) or	QQSY02SC2120
		TRANSISTOR KTC3203(Y)	NQSY0KTC3203
Q1201		TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q1202		TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q1203		TRANSISTOR 2SA1015-GR(TPE2) or	QQS102SA1015
		TRANSISTOR KTA1266(GR)	NQS40KTA1266
Q1204		TRANSISTOR 2SA1015-GR(TPE2) or	QQS102SA1015
		TRANSISTOR KTA1266(GR)	NQS40KTA1266
Q1351		TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q1385		TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
		TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
		TRANSISTOR 2SC2785(F) or	QQSF02SC2785
		TRANSISTOR 2SC2785(H) or	QQSH02SC2785
		TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
		TRANSISTOR KTC3199(GR) or	NQS10KTC3199
		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q2001		RES. BUILT-IN TRANSISTOR BA1F4M-T or	QQSZ00BA1F4M
		RES. BUILT-IN TRANSISTOR KRC103M	NQSZ0KRC103M
Q2002	B	TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
	B	TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
	B	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	B	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	B	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	B	TRANSISTOR KTC3199(GR) or	NQS10KTC3199

Ref. No.	Mark	Description	Part No.
	B	TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q2003	B	TRANSISTOR 2SC1815-GR(TPE2) or	QQS102SC1815
	B	TRANSISTOR 2SC1815-Y(TPE2) or	QQSY02SC1815
	B	TRANSISTOR 2SC2785(F) or	QQSF02SC2785
	B	TRANSISTOR 2SC2785(H) or	QQSH02SC2785
	B	TRANSISTOR 2SC2785(J) or	QQSJ02SC2785
	B	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	B	TRANSISTOR KTC3199(Y)	NQSY0KTC3199
		RESISTORS	
R056		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R057		CARBON RES. 1/4W J 150 Ω or	RCX4JATZ0151
		CARBON RES. 1/6W J 150 Ω	RCX6JATZ0151
R058		CHIP RES.(1608) 1/10W J 180 Ω or	RRXAJB5Z0181
		CHIP RES.(1608) 1/10W J 180 Ω	RRXAJR5Z0181
R060		CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R061		CARBON RES. 1/4W J 1.2k Ω or	RCX4JATZ0122
		CARBON RES. 1/6W J 1.2k Ω	RCX6JATZ0122
R062		CARBON RES. 1/4W J 5.6k Ω or	RCX4JATZ0562
		CARBON RES. 1/6W J 5.6k Ω	RCX6JATZ0562
R073		CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R075		CARBON RES. 1/4W J 4.7k Ω or	RCX4JATZ0472
		CARBON RES. 1/6W J 4.7k Ω	RCX6JATZ0472
R087		CARBON RES. 1/4W J 8.2k Ω or	RCX4JATZ0822
		CARBON RES. 1/6W J 8.2k Ω	RCX6JATZ0822
R088		CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R090		CARBON RES. 1/4W J 270 Ω	RCX4JATZ0271
R091		CARBON RES. 1/4W J 270 Ω	RCX4JATZ0271
R253		CHIP RES.(1608) 1/10W J 47k Ω or	RRXAJB5Z0473
		CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R254		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R303		CHIP RES.(1608) 1/10W J 47k Ω or	RRXAJB5Z0473
		CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R304		CHIP RES.(1608) 1/10W J 47k Ω or	RRXAJB5Z0473
		CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R305		CHIP RES.(1608) 1/10W J 47k Ω or	RRXAJB5Z0473
		CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R306		CHIP RES.(1608) 1/10W J 18k Ω or	RRXAJB5Z0183
		CHIP RES.(1608) 1/10W J 18k Ω	RRXAJR5Z0183
R309		CHIP RES.(1608) 1/10W J 15k Ω or	RRXAJB5Z0153
		CHIP RES.(1608) 1/10W J 15k Ω	RRXAJR5Z0153
R311		CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJB5Z0472
		CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R312		CHIP RES.(1608) 1/10W J 1.2k Ω or	RRXAJB5Z0122
		CHIP RES.(1608) 1/10W J 1.2k Ω	RRXAJR5Z0122
R313		CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJB5Z0104
		CHIP RES.(1608) 1/10W J 100k Ω	RRXAJR5Z0104
R322		CHIP RES.(1608) 1/10W J 5.6M Ω or	RRXAJB5Z0565
		CHIP RES.(1608) 1/10W J 5.6M Ω	RRXAJR5Z0565
R323		CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJB5Z0104
		CHIP RES.(1608) 1/10W J 100k Ω	RRXAJR5Z0104
R324		CHIP RES.(1608) 1/10W J 82k Ω or	RRXAJB5Z0823
		CHIP RES.(1608) 1/10W J 82k Ω	RRXAJR5Z0823
R326		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R327		CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJB5Z0472
		CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R328		CHIP RES.(1608) 1/10W J 680k Ω or	RRXAJB5Z0684
		CHIP RES.(1608) 1/10W J 680k Ω	RRXAJR5Z0684
R329		CHIP RES.(1608) 1/10W J 1.8k Ω or	RRXAJB5Z0182

Ref. No.	Mark	Description	Part No.
		CHIP RES.(1608) 1/10W J 1.8k Ω	RRXAJR5Z0182
R330		CHIP RES.(1608) 1/10W J 1.8k Ω or	RRXAJB5Z0182
		CHIP RES.(1608) 1/10W J 1.8k Ω	RRXAJR5Z0182
R331		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R332		CHIP RES.(1608) 1/10W J 8.2k Ω or	RRXAJB5Z0822
		CHIP RES.(1608) 1/10W J 8.2k Ω	RRXAJR5Z0822
R341		CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJB5Z0472
		CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R342		CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJB5Z0472
		CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R343		CHIP RES.(1608) 1/10W J 1.8k Ω or	RRXAJB5Z0182
		CHIP RES.(1608) 1/10W J 1.8k Ω	RRXAJR5Z0182
R357		PCB JUMPER D0.6-P5.0	JW5.0T
R391		CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R392		CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R395		PCB JUMPER D0.6-P5.0	JW5.0T
R397		CHIP RES.(1608) 1/10W J 220 Ω or	RRXAJB5Z0221
		CHIP RES.(1608) 1/10W J 220 Ω	RRXAJR5Z0221
R401	A	CHIP RES.(1608) 1/10W J 6.8k Ω or	RRXAJB5Z0682
	A	CHIP RES.(1608) 1/10W J 6.8k Ω	RRXAJR5Z0682
R401	B	CHIP RES.(1608) 1/10W J 27k Ω or	RRXAJB5Z0273
	B	CHIP RES.(1608) 1/10W J 27k Ω	RRXAJR5Z0273
R402	A	CHIP RES.(1608) 1/10W J 8.2k Ω or	RRXAJB5Z0822
	A	CHIP RES.(1608) 1/10W J 8.2k Ω	RRXAJR5Z0822
R402	B	CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJB5Z0472
	B	CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R407		CHIP RES.(1608) 1/10W J 2.2M Ω or	RRXAJB5Z0225
		CHIP RES.(1608) 1/10W J 2.2M Ω	RRXAJR5Z0225
R408		CHIP RES.(1608) 1/10W J 6.8k Ω or	RRXAJB5Z0682
		CHIP RES.(1608) 1/10W J 6.8k Ω	RRXAJR5Z0682
R409		CHIP RES.(1608) 1/10W J 3.3k Ω or	RRXAJB5Z0332
		CHIP RES.(1608) 1/10W J 3.3k Ω	RRXAJR5Z0332
R410		CHIP RES.(1608) 1/10W J 6.8k Ω or	RRXAJB5Z0682
		CHIP RES.(1608) 1/10W J 6.8k Ω	RRXAJR5Z0682
R411		CHIP RES.(1608) 1/10W J 1.8k Ω or	RRXAJB5Z0182
		CHIP RES.(1608) 1/10W J 1.8k Ω	RRXAJR5Z0182
R412		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R413		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R414		CHIP RES.(1608) 1/10W J 8.2k Ω or	RRXAJB5Z0822
		CHIP RES.(1608) 1/10W J 8.2k Ω	RRXAJR5Z0822
R415		CHIP RES.(1608) 1/10W J 12k Ω or	RRXAJB5Z0123
		CHIP RES.(1608) 1/10W J 12k Ω	RRXAJR5Z0123
R416		CHIP RES.(1608) 1/10W J 330k Ω or	RRXAJB5Z0334
		CHIP RES.(1608) 1/10W J 330k Ω	RRXAJR5Z0334
R417		CHIP RES.(1608) 1/10W J 150 Ω or	RRXAJB5Z0151
		CHIP RES.(1608) 1/10W J 150 Ω	RRXAJR5Z0151
R418		CHIP RES.(1608) 1/10W J 18k Ω or	RRXAJB5Z0183
		CHIP RES.(1608) 1/10W J 18k Ω	RRXAJR5Z0183
R419		CHIP RES.(1608) 1/10W J 910 Ω or	RRXAJB5Z0911
		CHIP RES.(1608) 1/10W J 910 Ω	RRXAJR5Z0911
R421		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R422		CHIP RES.(1608) 1/10W J 22k Ω or	RRXAJB5Z0223
		CHIP RES.(1608) 1/10W J 22k Ω	RRXAJR5Z0223
R424		CARBON RES. 1/4W J 47k Ω or	RCX4JATZ0473
		CARBON RES. 1/6W J 47k Ω	RCX6JATZ0473
R425		CARBON RES. 1/4W J 100 Ω or	RCX4JATZ0101
		CARBON RES. 1/6W J 100 Ω	RCX6JATZ0101

Ref. No.	Mark	Description	Part No.
R426		CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
		CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R428		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R429		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R430	A	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
	A	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R431	A	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
	A	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R451	A	CHIP RES.(1608) 1/10W J 12k Ω or	RRXAJB5Z0123
	A	CHIP RES.(1608) 1/10W J 12k Ω	RRXAJR5Z0123
R452	A	CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJB5Z0472
	A	CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R453	A	CHIP RES.(1608) 1/10W J 47k Ω or	RRXAJB5Z0473
	A	CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R453	B	CHIP RES.(1608) 1/10W J 27k Ω or	RRXAJB5Z0273
	B	CHIP RES.(1608) 1/10W J 27k Ω	RRXAJR5Z0273
R454	A	CHIP RES.(1608) 1/10W J 8.2k Ω or	RRXAJB5Z0822
	A	CHIP RES.(1608) 1/10W J 8.2k Ω	RRXAJR5Z0822
R454	B	CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJB5Z0472
	B	CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R455	A	CHIP RES.(1608) 1/10W J 47k Ω or	RRXAJB5Z0473
	A	CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R456	A	CHIP RES.(1608) 1/10W J 8.2k Ω or	RRXAJB5Z0822
	A	CHIP RES.(1608) 1/10W J 8.2k Ω	RRXAJR5Z0822
R457	A	CHIP RES.(1608) 1/10W J 470 Ω or	RRXAJB5Z0471
	A	CHIP RES.(1608) 1/10W J 470 Ω	RRXAJR5Z0471
R458	A	CHIP RES.(1608) 1/10W J 2.7k Ω or	RRXAJB5Z0272
	A	CHIP RES.(1608) 1/10W J 2.7k Ω	RRXAJR5Z0272
R459	A	CHIP RES.(1608) 1/10W J 22k Ω or	RRXAJB5Z0223
	A	CHIP RES.(1608) 1/10W J 22k Ω	RRXAJR5Z0223
R462	A	CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJB5Z0472
	A	CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R463	A	CHIP RES.(1608) 1/10W J 47k Ω or	RRXAJB5Z0473
	A	CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R464	A	CHIP RES.(1608) 1/10W J 8.2k Ω or	RRXAJB5Z0822
	A	CHIP RES.(1608) 1/10W J 8.2k Ω	RRXAJR5Z0822
R465	A	CHIP RES.(1608) 1/10W J 47k Ω or	RRXAJB5Z0473
	A	CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R465	B	CHIP RES.(1608) 1/10W J 27k Ω or	RRXAJB5Z0273
	B	CHIP RES.(1608) 1/10W J 27k Ω	RRXAJR5Z0273
R466	A	CHIP RES.(1608) 1/10W J 8.2k Ω or	RRXAJB5Z0822
	A	CHIP RES.(1608) 1/10W J 8.2k Ω	RRXAJR5Z0822
R466	B	CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJB5Z0472
	B	CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R467	A	CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
	A	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R468	A	CHIP RES.(1608) 1/10W J 470 Ω or	RRXAJB5Z0471
	A	CHIP RES.(1608) 1/10W J 470 Ω	RRXAJR5Z0471
R469	A	CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
	A	CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R470	A	CHIP RES.(1608) 1/10W J 470 Ω or	RRXAJB5Z0471
	A	CHIP RES.(1608) 1/10W J 470 Ω	RRXAJR5Z0471
R471	A	CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
	A	CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R472	A	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
	A	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R484	A	CHIP RES.(1608) 1/10W J 47k Ω or	RRXAJB5Z0473
	A	CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R485	A	CHIP RES.(1608) 1/10W J 15k Ω or	RRXAJB5Z0153

Ref. No.	Mark	Description	Part No.
	A	CHIP RES.(1608) 1/10W J 15k Ω	RRXAJR5Z0153
R486	A	CHIP RES.(1608) 1/10W J 47k Ω or	RRXAJB5Z0473
	A	CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R487	A	CHIP RES.(1608) 1/10W J 15k Ω or	RRXAJB5Z0153
	A	CHIP RES.(1608) 1/10W J 15k Ω	RRXAJR5Z0153
R502		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R503		CHIP RES.(1608) 1/10W J 820 Ω or	RRXAJB5Z0821
		CHIP RES.(1608) 1/10W J 820 Ω	RRXAJR5Z0821
R504		CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJB5Z0104
		CHIP RES.(1608) 1/10W J 100k Ω	RRXAJR5Z0104
R506		CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJB5Z0104
		CHIP RES.(1608) 1/10W J 100k Ω	RRXAJR5Z0104
R508		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R511		CHIP RES.(1608) 1/10W J 39k Ω or	RRXAJB5Z0393
		CHIP RES.(1608) 1/10W J 39k Ω	RRXAJR5Z0393
R517		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R518		CHIP RES.(1608) 1/10W J 220k Ω or	RRXAJB5Z0224
		CHIP RES.(1608) 1/10W J 220k Ω	RRXAJR5Z0224
R521		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R523		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R524		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R525		CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R526		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R527		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R528		CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R529		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R530		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R531		CARBON RES. 1/6W G 4.7k Ω or	RCX6GATZ0472
		CARBON RES. 1/4W G 4.7k Ω	RCX4GATZ0472
R532		CARBON RES. 1/6W G 1.5k Ω or	RCX6GATZ0152
		CARBON RES. 1/4W G 1.5k Ω	RCX4GATZ0152
R533		CARBON RES. 1/6W G 22k Ω or	RCX6GATZ0223
		CARBON RES. 1/4W G 22k Ω	RCX4GATZ0223
R534		CARBON RES. 1/6W G 470 Ω or	RCX6GATZ0471
		CARBON RES. 1/4W G 470 Ω	RCX4GATZ0471
R535		CARBON RES. 1/6W G 10k Ω or	RCX6GATZ0103
		CARBON RES. 1/4W G 10k Ω	RCX4GATZ0103
R536		CARBON RES. 1/6W G 3.6k Ω or	RCX6GATZ0362
		CARBON RES. 1/4W G 3.6k Ω	RCX4GATZ0362
R537		CHIP RES.(1608) 1/10W J 33k Ω or	RRXAJB5Z0333
		CHIP RES.(1608) 1/10W J 33k Ω	RRXAJR5Z0333
R540		CHIP RES.(1608) 1/10W J 390k Ω or	RRXAJB5Z0394
		CHIP RES.(1608) 1/10W J 390k Ω	RRXAJR5Z0394
R541		CHIP RES.(1608) 1/10W J 390k Ω or	RRXAJB5Z0394
		CHIP RES.(1608) 1/10W J 390k Ω	RRXAJR5Z0394
R542		CARBON RES. 1/4W J 270 Ω	RCX4JATZ0271
R543		CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJB5Z0472
		CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R544		CHIP RES.(1608) 1/10W J 18k Ω or	RRXAJB5Z0183
		CHIP RES.(1608) 1/10W J 18k Ω	RRXAJR5Z0183
R545		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103

Ref. No.	Mark	Description	Part No.
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R546		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R551		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R561		CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
		CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R566		CARBON RES. 1/4W J 220 Ω or	RCX4JATZ0221
		CARBON RES. 1/6W J 220 Ω	RCX6JATZ0221
R567		CARBON RES. 1/4W J 3.9k Ω or	RCX4JATZ0392
		CARBON RES. 1/6W J 3.9k Ω	RCX6JATZ0392
R568		CARBON RES. 1/4W J 220 Ω or	RCX4JATZ0221
		CARBON RES. 1/6W J 220 Ω	RCX6JATZ0221
R570		CARBON RES. 1/4W J 3.9k Ω or	RCX4JATZ0392
		CARBON RES. 1/6W J 3.9k Ω	RCX6JATZ0392
R571	A	CARBON RES. 1/4W J 10 Ω or	RCX4JATZ0100
	A	CARBON RES. 1/6W J 10 Ω	RCX6JATZ0100
R572	A	CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJB5Z0104
	A	CHIP RES.(1608) 1/10W J 100k Ω	RRXAJR5Z0104
R573		CARBON RES. 1/4W J 150 Ω or	RCX4JATZ0151
		CARBON RES. 1/6W J 150 Ω	RCX6JATZ0151
R574		CARBON RES. 1/4W J 150 Ω or	RCX4JATZ0151
		CARBON RES. 1/6W J 150 Ω	RCX6JATZ0151
R575		CARBON RES. 1/4W J 3.9k Ω or	RCX4JATZ0392
		CARBON RES. 1/6W J 3.9k Ω	RCX6JATZ0392
R576		CARBON RES. 1/4W J 3.9k Ω or	RCX4JATZ0392
		CARBON RES. 1/6W J 3.9k Ω	RCX6JATZ0392
R583		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R590		CHIP RES.(1608) 1/10W J 1.5k Ω or	RRXAJB5Z0152
		CHIP RES.(1608) 1/10W J 1.5k Ω	RRXAJR5Z0152
R593		CHIP RES.(1608) 1/10W J 1.8k Ω or	RRXAJB5Z0182
		CHIP RES.(1608) 1/10W J 1.8k Ω	RRXAJR5Z0182
R594		CHIP RES.(1608) 1/10W J 3.9k Ω or	RRXAJB5Z0392
		CHIP RES.(1608) 1/10W J 3.9k Ω	RRXAJR5Z0392
R600	A	CHIP RES.(1608) 1/10W J 5.1k Ω or	RRXAJB5Z0512
	A	CHIP RES.(1608) 1/10W J 5.1k Ω	RRXAJR5Z0512
R602	A	CHIP RES.(1608) 1/10W J 5.1k Ω or	RRXAJB5Z0512
	A	CHIP RES.(1608) 1/10W J 5.1k Ω	RRXAJR5Z0512
R603	A	CHIP RES.(1608) 1/10W J 8.2k Ω or	RRXAJB5Z0822
	A	CHIP RES.(1608) 1/10W J 8.2k Ω	RRXAJR5Z0822
R605	A	CHIP RES.(1608) 1/10W J 8.2k Ω or	RRXAJB5Z0822
	A	CHIP RES.(1608) 1/10W J 8.2k Ω	RRXAJR5Z0822
R606	B	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R607	B	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R610		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R612		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R614		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R615		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R618		CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R620		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R625	B	CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
	B	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R626	A	CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
	A	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R640	A	CHIP RES.(1608) 1/10W J 3.9k Ω or	RRXAJB5Z0392

Ref. No.	Mark	Description	Part No.
	A	CHIP RES.(1608) 1/10W J 3.9k Ω	RRXAJR5Z0392
R701		CHIP RES.(1608) 1/10W J 330 Ω or	RRXAJB5Z0331
		CHIP RES.(1608) 1/10W J 330 Ω	RRXAJR5Z0331
R702		CARBON RES. 1/4W J 1.8k Ω	RCX4JATZ0182
R703	B	CHIP RES.(1608) 1/10W J 47k Ω or	RRXAJB5Z0473
	B	CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R704		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R705		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R706	A	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
	A	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R707	B	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
	B	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R751		CHIP RES.(1608) 1/10W J 75 Ω or	RRXAJB5Z0750
		CHIP RES.(1608) 1/10W J 75 Ω	RRXAJR5Z0750
R752		CHIP RES.(1608) 1/10W J 75 Ω or	RRXAJB5Z0750
		CHIP RES.(1608) 1/10W J 75 Ω	RRXAJR5Z0750
R753		CHIP RES.(1608) 1/10W J 75 Ω or	RRXAJB5Z0750
		CHIP RES.(1608) 1/10W J 75 Ω	RRXAJR5Z0750
R756	B	CHIP RES.(1608) 1/10W J 47k Ω or	RRXAJB5Z0473
	B	CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R757	B	CHIP RES.(1608) 1/10W J 47k Ω or	RRXAJB5Z0473
	B	CHIP RES.(1608) 1/10W J 47k Ω	RRXAJR5Z0473
R777		CARBON RES. 1/4W J 27k Ω or	RCX4JATZ0273
		CARBON RES. 1/6W J 27k Ω	RCX6JATZ0273
R778		CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R779		CARBON RES. 1/4W J 330 Ω or	RCX4JATZ0331
		CARBON RES. 1/6W J 330 Ω	RCX6JATZ0331
R780		CARBON RES. 1/4W J 47k Ω or	RCX4JATZ0473
		CARBON RES. 1/6W J 47k Ω	RCX6JATZ0473
R782	B	CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJB5Z0104
	B	CHIP RES.(1608) 1/10W J 100k Ω	RRXAJR5Z0104
R783	B	CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJB5Z0104
	B	CHIP RES.(1608) 1/10W J 100k Ω	RRXAJR5Z0104
R784	B	CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJB5Z0472
	B	CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R785	B	CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJB5Z0104
	B	CHIP RES.(1608) 1/10W J 100k Ω	RRXAJR5Z0104
R786	B	CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJB5Z0104
	B	CHIP RES.(1608) 1/10W J 100k Ω	RRXAJR5Z0104
R787	B	CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJB5Z0472
	B	CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R1002	A	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R1013	A	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1025		CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R1040	A	PCB JUMPER D0.6-P5.0	JW5.0T
R1042	A	CARBON RES. 1/4W J 5.6 Ω or	RCX4JATZ05R6
	A	CARBON RES. 1/6W J 5.6 Ω	RCX6JATZ05R6
R1044		CHIP RES.(1608) 1/10W J 220k Ω or	RRXAJB5Z0224
		CHIP RES.(1608) 1/10W J 220k Ω	RRXAJR5Z0224
R1059		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R1068		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1076		CHIP RES.(1608) 1/10W J 22k Ω or	RRXAJB5Z0223
		CHIP RES.(1608) 1/10W J 22k Ω	RRXAJR5Z0223
R1077		CARBON RES. 1/4W J 1.8k Ω	RCX4JATZ0182
R1078	A	CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R1080		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1085		CHIP RES.(1608) 1/10W J 3.9k Ω or	RRXAJB5Z0392

Ref. No.	Mark	Description	Part No.
		CHIP RES.(1608) 1/10W J 3.9k Ω	RRXAJR5Z0392
R1086		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R1087		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R1090		CHIP RES.(1608) 1/10W J 3.9k Ω or	RRXAJB5Z0392
		CHIP RES.(1608) 1/10W J 3.9k Ω	RRXAJR5Z0392
R1091		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R1203		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1204		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1205		CHIP RES.(1608) 1/10W F 20k Ω or	RRXAFB5H2002
		CHIP RES.(1608) 1/10W F 20k Ω or	RRXAFB5Z2002
		CHIP RES.(1608) 1/10W F 20k Ω or	RRXAFR5H2002
		CHIP RES.(1608) 1/10W F 20k Ω	RRXAFR5Z2002
R1206		CHIP RES.(1608) 1/10W F 20k Ω or	RRXAFB5H2002
		CHIP RES.(1608) 1/10W F 20k Ω or	RRXAFB5Z2002
		CHIP RES.(1608) 1/10W F 20k Ω or	RRXAFR5H2002
		CHIP RES.(1608) 1/10W F 20k Ω	RRXAFR5Z2002
R1207		CHIP RES.(1608) 1/10W J 8.2k Ω or	RRXAJB5Z0822
		CHIP RES.(1608) 1/10W J 8.2k Ω	RRXAJR5Z0822
R1208		CHIP RES.(1608) 1/10W J 8.2k Ω or	RRXAJB5Z0822
		CHIP RES.(1608) 1/10W J 8.2k Ω	RRXAJR5Z0822
R1209		CHIP RES.(1608) 1/10W F 30k Ω or	RRXAFB5H3002
		CHIP RES.(1608) 1/10W F 30k Ω or	RRXAFB5Z3002
		CHIP RES.(1608) 1/10W F 30k Ω or	RRXAFR5H3002
		CHIP RES.(1608) 1/10W F 30k Ω	RRXAFR5Z3002
R1210		CHIP RES.(1608) 1/10W F 30k Ω or	RRXAFB5H3002
		CHIP RES.(1608) 1/10W F 30k Ω or	RRXAFB5Z3002
		CHIP RES.(1608) 1/10W F 30k Ω or	RRXAFR5H3002
		CHIP RES.(1608) 1/10W F 30k Ω	RRXAFR5Z3002
R1211		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1212		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1221		CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJB5Z0104
		CHIP RES.(1608) 1/10W J 100k Ω	RRXAJR5Z0104
R1222		CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJB5Z0104
		CHIP RES.(1608) 1/10W J 100k Ω	RRXAJR5Z0104
R1223		CHIP RES.(1608) 1/10W J 470 Ω or	RRXAJB5Z0471
		CHIP RES.(1608) 1/10W J 470 Ω	RRXAJR5Z0471
R1224		CHIP RES.(1608) 1/10W J 470 Ω or	RRXAJB5Z0471
		CHIP RES.(1608) 1/10W J 470 Ω	RRXAJR5Z0471
R1225		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R1226		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R1233		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1235		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R1236		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R1237		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R1238		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R1239		CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJB5Z0104
		CHIP RES.(1608) 1/10W J 100k Ω	RRXAJR5Z0104

Ref. No.	Mark	Description	Part No.
R1240		CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJB5Z0104
		CHIP RES.(1608) 1/10W J 100k Ω	RRXAJR5Z0104
R1245		CHIP RES.(1608) 1/10W J 10 Ω or	RRXAJB5Z0100
		CHIP RES.(1608) 1/10W J 10 Ω	RRXAJR5Z0100
R1351		CHIP RES.(1608) 1/10W J 1.8k Ω or	RRXAJB5Z0182
		CHIP RES.(1608) 1/10W J 1.8k Ω	RRXAJR5Z0182
R1352		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R1353		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
R1354		CHIP RES.(1608) 1/10W J 220 Ω or	RRXAJB5Z0221
		CHIP RES.(1608) 1/10W J 220 Ω	RRXAJR5Z0221
R1355		CHIP RES.(1608) 1/10W J 75 Ω or	RRXAJB5Z0750
		CHIP RES.(1608) 1/10W J 75 Ω	RRXAJR5Z0750
R1356		CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJB5Z0104
		CHIP RES.(1608) 1/10W J 100k Ω	RRXAJR5Z0104
R1371		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1392		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1396		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R1397		CHIP RES.(1608) 1/10W J 100 Ω or	RRXAJB5Z0101
		CHIP RES.(1608) 1/10W J 100 Ω	RRXAJR5Z0101
R1402		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R1421		CHIP RES.(1608) 1/10W F 75 Ω or	RRXAFB5H75R0
		CHIP RES.(1608) 1/10W F 75 Ω or	RRXAFB5Z75R0
		CHIP RES.(1608) 1/10W F 75 Ω or	RRXAFR5H75R0
		CHIP RES.(1608) 1/10W F 75 Ω	RRXAFR5Z75R0
R1422		CHIP RES.(1608) 1/10W J 75 Ω or	RRXAJB5Z0750
		CHIP RES.(1608) 1/10W J 75 Ω	RRXAJR5Z0750
R1441		CHIP RES.(1608) 1/10W F 75 Ω or	RRXAFB5H75R0
		CHIP RES.(1608) 1/10W F 75 Ω or	RRXAFB5Z75R0
		CHIP RES.(1608) 1/10W F 75 Ω or	RRXAFR5H75R0
		CHIP RES.(1608) 1/10W F 75 Ω	RRXAFR5Z75R0
R1442		CHIP RES.(1608) 1/10W J 75 Ω or	RRXAJB5Z0750
		CHIP RES.(1608) 1/10W J 75 Ω	RRXAJR5Z0750
R1443		CHIP RES.(1608) 1/10W J 75 Ω or	RRXAJB5Z0750
		CHIP RES.(1608) 1/10W J 75 Ω	RRXAJR5Z0750
R1461		CHIP RES.(1608) 1/10W F 36 Ω or	RRXAFB5H36R0
		CHIP RES.(1608) 1/10W F 36 Ω or	RRXAFB5Z36R0
		CHIP RES.(1608) 1/10W F 36 Ω or	RRXAFR5H36R0
		CHIP RES.(1608) 1/10W F 36 Ω	RRXAFR5Z36R0
R1462		CHIP RES.(1608) 1/10W J 75 Ω or	RRXAJB5Z0750
		CHIP RES.(1608) 1/10W J 75 Ω	RRXAJR5Z0750
R1481		CHIP RES.(1608) 1/10W F 36 Ω or	RRXAFB5H36R0
		CHIP RES.(1608) 1/10W F 36 Ω or	RRXAFB5Z36R0
		CHIP RES.(1608) 1/10W F 36 Ω or	RRXAFR5H36R0
		CHIP RES.(1608) 1/10W F 36 Ω	RRXAFR5Z36R0
R1482		CHIP RES.(1608) 1/10W J 75 Ω or	RRXAJB5Z0750
		CHIP RES.(1608) 1/10W J 75 Ω	RRXAJR5Z0750
R1612		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R2001		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R2002		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R2003		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R2005		CHIP RES.(1608) 1/10W J 6.8k Ω or	RRXAJB5Z0682
		CHIP RES.(1608) 1/10W J 6.8k Ω	RRXAJR5Z0682

Ref. No.	Mark	Description	Part No.
R2006		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R2025	A	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
	A	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R2028		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R2031		CHIP RES.(1608) 1/10W J 22k Ω or	RRXAJB5Z0223
		CHIP RES.(1608) 1/10W J 22k Ω	RRXAJR5Z0223
R2033	A	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
	A	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R2041	A	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
	A	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R2042	A	CHIP RES.(1608) 1/10W J 3.3k Ω or	RRXAJB5Z0332
	A	CHIP RES.(1608) 1/10W J 3.3k Ω	RRXAJR5Z0332
R2050	A	CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
	A	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R2051	B	CHIP RES.(1608) 1/10W J 3.9k Ω or	RRXAJB5Z0392
	B	CHIP RES.(1608) 1/10W J 3.9k Ω	RRXAJR5Z0392
R2052	B	CHIP RES.(1608) 1/10W J 3.9k Ω or	RRXAJB5Z0392
	B	CHIP RES.(1608) 1/10W J 3.9k Ω	RRXAJR5Z0392
R2053	B	CARBON RES. 1/4W J 270 Ω	RCX4JATZ0271
R2054	B	CARBON RES. 1/4W J 270 Ω	RCX4JATZ0271
R2055	B	CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
	B	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R2056	B	CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
	B	CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R2060	A	CHIP RES.(1608) 1/10W J 5.6k Ω or	RRXAJB5Z0562
	A	CHIP RES.(1608) 1/10W J 5.6k Ω	RRXAJR5Z0562
R2062	A	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
	A	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R2063	B	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
	B	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R2064	A	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
	A	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
SWITCHES			
SW502		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW503		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW504		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW505		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW511		LEAF SWITCH MXS01830MVP0	SSC0101MCE03
SW512		ROTARY MODE SWITCH SSS-50MD	SSR0106KB002
SW2002		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW2003		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
MISCELLANEOUS			
2B11		SHIELD ASSEMBLY H9200UD	0VM413279
2B15		BUSH, LED(F) H3700UD	0VM409508
2B33		HEATSINK H9400UD	0VM414786
2L013		SCREW, S-TIGHT M3X8 BIND + CHROME	GBMS3080

Ref. No.	Mark	Description	Part No.
FIP502	A	V.F.D. 7-BT-292GN or	TVFD150FT010
	A	V.F.D. 20U29100SAN	TVFD150FT007
JC02		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
JC03	A	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
	A	CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
JK751		RCA JACK MSP-213V1-324 PBSN	JXRL030LY064
JK752	A	RCA JACK MSP-213V3-324 PBSN	JYRL030LY021
JK752	B	RCA JACK MSP-382V-14 PBSN	JXRL020LY074
JK753		RCA JACK(YELLOW) MSP-281V4-B	JXRL010LY003
JK754	A	RCA JACK(WHITE) MSP-281V1-B	JXRL010LY005
JK755	A	RCA JACK(RED) MSP-281V3-A	JYRL010LY002
JK755	B	RCA JACK(WHITE) MSP-281V1-B	JXRL010LY005
JK756		RCA JACK MSP-382V-12 PBSN	JXRL020LY063
JK1202		RCA JACK(BLACK) MSP-281V2-B	JXRL010LY062
JK1401		S TYPE JACK MDC-050V-2.4	JXEL040LY001
JK1403		RCA JACK MSP-213V1-652 PBSN	JXRL030LY061
RM2001		REMOTE RECEIVER MIM-93M6DKF or	USESJRSUNT01
		REMOTE RECEIVER PIC-37042LU	USESJRSKK033
TP301		PCB JUMPER D0.6-P10.0	JW10.0T
TP302		PCB JUMPER D0.6-P16.0	JW16.0T
TP452		PCB JUMPER D0.6-P6.5	JW6.5T
TP502		PCB JUMPER D0.6-P5.0	JW5.0T
TP505		PCB JUMPER D0.6-P5.0	JW5.0T
TP506		PCB JUMPER D0.6-P14.0	JW14.0T
TP507		PCB JUMPER D0.6-P7.5	JW7.5T
TP513		PCB JUMPER D0.6-P10.0	JW10.0T
TP751		PCB JUMPER D0.6-P10.0	JW10.0T
TP753		PCB JUMPER D0.6-P7.5	JW7.5T
TP754		PCB JUMPER D0.6-P7.5	JW7.5T
TU701		TUNER UNIT TMZH2-001A or	UTUNNTUAL030
		TUNER UNIT TMZH2-010A or	UTUNNTUAL034
		TUNER UNIT VH025AP	UTUNNTUSP024
VR501		CARBON P.O.T. 100k Ω B	VRCB104HH014
W011		FFC CABLE, 22P FFC/P1.00/250	WX1H9400-011
W014		FFC CABLE, 16P FFC/P1.00/220	WX1H9400-014
W017		FFC CABLE, 4P FFC/P1.00/210	WX1H9400-017
X301		X'TAL 3.579545MHz(20PPM) or	FXC355LCHE01
		X'TAL 3.579545MHz(20PPM) or	FXC355LDS001
		X'TAL 3.579545MHz(20PPM) or	FXC355LDYN01
		X'TAL 3.579545MHz(20PPM)	FXC355LLN003
X502		X'TAL 32.768kHz(20PPM) or	FXC323LDS002
		X'TAL 32.768kHz(20PPM)	FXC323LQUA01

FUNCTION CBA

Ref. No.	Mark	Description	Part No.
		FUNCTION CBA(MCV-B) Consists of the following	---------
DIODES			
		LED EXCLUSIVE(A)	
D561		LED(RED) 204HD/E	NPQZ00204HDE
		LED EXCLUSIVE(B)	
D561		LED(RED) LTL-4211N	NPQZLTL4211N
RESISTORS			
R584		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
R585		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R586		CHIP RES.(1608) 1/10W J 1.2k Ω or	RRXAJB5Z0122

Ref. No.	Mark	Description	Part No.
		CHIP RES.(1608) 1/10W J 1.2k Ω	RRXAJR5Z0122
R587		CHIP RES.(1608) 1/10W J 1.5k Ω or	RRXAJB5Z0152
		CHIP RES.(1608) 1/10W J 1.5k Ω	RRXAJR5Z0152
R588		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω	RRXAJR5Z0222
		SWITCHES	
SW501		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW508		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW509		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW513		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW514		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
		MISCELLANEOUS	
2B13		BUSH, LED(E) H1600UD	0VM408832
		LED EXCLUSIVE(A)	
W004		PARALLEL WIRE, 3P AWG26#2651/P2.0/ 125	WX1H9400-004

DVD OP/CL CBA

Ref. No.	Mark	Description	Part No.
		DVD OP/CL CBA(MCV-C) Consists of the following	---------
		SWITCHES	
SW2001		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
		MISCELLANEOUS	
W003		PARALLEL WIRE, 2P AWG26#2651/P2.0/ 100	WX1H9400-003

DVD SW CBA

Ref. No.	Mark	Description	Part No.
	B	DVD SW CBA(MCV-D) Consists of the following	---------
		SWITCHES	
SW2005	B	TACT SWITCH KSM0614B or	SST0101HH013
	B	TACT SWITCH SKQSAF001A or	SST0101AL041
	B	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
SW2006	B	TACT SWITCH KSM0614B or	SST0101HH013
	B	TACT SWITCH SKQSAF001A or	SST0101AL041
	B	TACT SWITCH TC-1104(H=9.5)	SST0101DNG01
		MISCELLANEOUS	
W005	B	PARALLEL WIRE, 3P AWG26#2651/P2.0/ 100	WX1H9400-005

SENSOR CBA

Ref. No.	Mark	Description	Part No.
		SENSOR CBA Consists of the following	0VSA13627
		TRANSISTORS	
Q503		PHOTO TRANSISTOR PT204-6B-12 or	NPWZT2046B12
		PHOTO TRANSISTOR MID-32A22	NPWZM1D32A22
Q504		PHOTO TRANSISTOR PT204-6B-12 or	NPWZT2046B12
		PHOTO TRANSISTOR MID-32A22	NPWZM1D32A22

PSV CBA

Ref. No.	Mark	Description	Part No.
	A B	PSV CBA PSV CBA Consists of the following	0VSA13618 0VSA13649
		POWER SUPPLY CBA JUNCTION CBA	---------- ----------

POWER SUPPLY CBA

Ref. No.	Mark	Description	Part No.
		POWER SUPPLY CBA Consists of the following	---------
		CAPACITORS	
C013		ELECTROLYTIC CAP. 10μF/50V M H7	CE1JMASSL100
C017		CERAMIC CAP. YV Z 0.01μF/50V	CCD1JZSYV103
C018		ELECTROLYTIC CAP. 470μF/25V M or	CE1EMASDL471
		ELECTROLYTIC CAP. 470μF/25V M	CE1EMASTL471
C020		ELECTROLYTIC CAP. 1000μF/16V M or	CE1CMZPDL102
		ELECTROLYTIC CAP. 1000μF/16V M	CE1CMZPTL102
C021		ELECTROLYTIC CAP. 470μF/10V M or	CE1AMASDL471
		ELECTROLYTIC CAP. 470μF/10V M	CE1AMASTL471
C1001⚠		METALLIZED FILM CAP. 0.022μF/250V K or	CT2E223DC011
⚠		METALLIZED FILM CAP. 0.022μF/275V K or	CT2E223HJE05
⚠		METALLIZED FILM CAP. 0.022μF/275V K	CT2E223HJE13
C1002		ELECTROLYTIC CAP. 22μF/50V M or	CE1JMASDL220
		ELECTROLYTIC CAP. 22μF/50V M	CE1JMASTL220
C1003		CERAMIC CAP. B K 0.01μF/500V	CCD2JKP0B103
C1004		ELECTROLYTIC CAP. 220μF/200V M	CA2D221S6008
C1005		CERAMIC CAP. B K 120pF/500V	CCD2JKP0B121
C1006⚠		SAFETY CAP. 3300pF/250V or	CCD2EMA0E332
⚠		SAFETY CAP. 3300pF/250V	CCG2EMA0F332
C1007		ELECTROLYTIC CAP. 1000μF/6.3V M or	CE0KMASDL102
		ELECTROLYTIC CAP. 1000μF/6.3V M	CE0KMASTL102
C1008		CERAMIC CAP. B K 220pF/500V	CCD2JKP0B221
C1013		CERAMIC CAP.(AX) X K 3300pF/16V	CCA1CKT0X332
C1014		ELECTROLYTIC CAP. 470μF/25V M or	CE1EMASDL471
		ELECTROLYTIC CAP. 470μF/25V M	CE1EMASTL471
C1018	A	ELECTROLYTIC CAP. 100μF/10V M H7	CE1AMAVSL101
C1021	A	CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JK30B103
C1022		CHIP CERAMIC CAP. B K 5600pF/50V	CHD1JK30B562
C1029		CERAMIC CAP.(AX) X K 5600pF/16V	CCA1CKT0X562
C1032		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMAVSL100
C1033		CERAMIC CAP. YV Z 0.022μF/50V	CCD1JZSYV223
		DIODES	
D013		FAST RECOVERY DIODE ERA18-04 or	QDPZ0ERA1804
		RECTIFIER DIODE BA157	NDQZ000BA157
D015		SCHOTTKY BARRIER DIODE SB360	NDQZ000SB360
D016		SCHOTTKY BARRIER DIODE SB340	NDQZ000SB340
D018		ZENER DIODE DZ-8.2BSAT265 or	NDTA0DZ8R2BS
		ZENER DIODE MTZJT-778.2A	QDTA0MTZJ8R2
D020		PCB JUMPER D0.6-P5.0	JW5.0T
D030		FAST RECOVERY DIODE ERA18-04 or	QDPZ0ERA1804

Ref. No.	Mark	Description	Part No.
		RECTIFIER DIODE BA157	NDQZ000BA157
D1001		RECTIFIER DIODE 1N4005	NDQZ001N4005
D1002		RECTIFIER DIODE 1N4005	NDQZ001N4005
D1003		RECTIFIER DIODE 1N4005	NDQZ001N4005
D1004		RECTIFIER DIODE 1N4005	NDQZ001N4005
D1006		PCB JUMPER D0.6-P5.0	JW5.0T
D1007		CARBON RES. 1/4W J 68k Ω	RCX4JATZ0683
D1008		SCHOTTKY BARRIER DIODE ERB81-004 or	AERB81004***
		SCHOTTKY BARRIER DIODE SB140	NDQZ000SB140
D1010		FAST RECOVERY DIODE ERA18-04 or	QDPZ0ERA1804
		RECTIFIER DIODE BA157	NDQZ000BA157
D1011		RECTIFIER DIODE BA158 or	NDQZ000BA158
		RECTIFIER DIODE ERA22-10	QDPZ0ERA2210
D1012		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1016	A	RECTIFIER DIODE FR101	NDWZ000FR101
D1017	A	ZENER DIODE DZ-20BSBT265 or	NDTB00DZ20BS
	A	ZENER DIODE MTZJT-7720B	QDTB00MTZJ20
D1018		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1020		SCHOTTKY BARRIER DIODE SB340	NDQZ000SB340
D1022		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1024		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1025		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D1031		PCB JUMPER D0.6-P5.0	JW5.0T
D1032		PCB JUMPER D0.6-P5.0	JW5.0T
ICS			
IC1001⚠		PHOTOCOUPLER LTV-817B-F or	NPEB0LTV817F
⚠		PHOTOCOUPLER LTV-817C-F	NPEC0LTV817F
IC1006		IC KIA431A-AT or	NSZBA0TJY018
		IC KIA431-AT or	NSZLA0TJY001
		IC:SHUNT REGULATOR TL431A-TA	NSZBA0TQ2003
COILS			
L003		BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
L009		CHOKE COIL 47μH-K	LLBD00PKV007
L1001⚠		LINE FILTER 27MH CSA-LF199A or	LLBG00ZSA008
⚠		LINE FILTER 27MH TLF14CB2730R4	LLBG00ZTU034
L1007		CHOKE COIL 47μH-K	LLBD00PKV007
L1020		CHOKE COIL 47μH-K	LLBD00PKV007
TRANSISTORS			
Q1001		FET 2SK3543	QFWZ02SK3543
Q1003		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
Q1008		TRANSISTOR KTC3199(Y)	NQSY0KTC3199
RESISTORS			
R001		CARBON RES. 1/2W J 3.3M Ω or	RCX2335DP001
		GLASS GLAZE RES. 1/2W J 3.3M Ω	RXX2JZLZ0335
R037		CARBON RES. 1/4W J 1.8k Ω	RCX4JATZ0182
R082		CARBON RES. 1/4W J 1.8k Ω	RCX4JATZ0182
R1004		METAL OXIDE FILM RES. 2W J 82k Ω or	RN02JZLZ0823
		METAL OXIDE FILM RES. 2W J 82k Ω	RN02JZQZ0823
R1005		CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
R1006		CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
R1008	A	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1008	B	CARBON RES. 1/4W G 1k Ω	RCX4GATZ0102
R1010		CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
		CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R1011		METAL OXIDE FILM RES. 1W J 0.68 Ω or	RN01R68KE009
		METAL OXIDE FILM RES. 1W J 0.68 Ω	RN01R68ZU001
R1019		CHIP RES.(1608) 1/10W F 2.2k Ω or	RRXAFR5H2201
		CHIP RES.(1608) 1/10W F 2.2k Ω	RRXAFR5Z2201
R1020		CHIP RES.(1608) 1/10W J 1.5k Ω or	RRXAJR5Z0152
		CHIP RES.(1608) 1/10W J 390 Ω	RRXAJR5Z0391
R1021		CHIP RES.(1608) 1/10W J 1k Ω	RRXAJR5Z0102
R1022		CHIP RES.(1608) 1/10W J 4.7k Ω	RRXAJR5Z0472
R1023		CHIP RES.(1608) 1/10W F 2k Ω or	RRXAFR5H2001
		CHIP RES.(1608) 1/10W F 2k Ω	RRXAFR5Z2001
R1024		CHIP RES.(1608) 1/10W J 33k Ω	RRXAJR5Z0333
R1029	A	CARBON RES. 1/4W J 150k Ω or	RCX4JATZ0154
	A	CARBON RES. 1/6W J 150k Ω	RCX6JATZ0154
R1029	B	CARBON RES. 1/6W J 82k Ω or	RCX6JATZ0823
	B	CARBON RES. 1/4W J 82k Ω	RCX4JATZ0823
R1032		CARBON RES. 1/4W J 3.3k Ω or	RCX4JATZ0332
		CARBON RES. 1/6W J 3.3k Ω	RCX6JATZ0332
R1034		CARBON RES. 1/4W J 680k Ω	RCX4JATZ0684
R1035		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R1036		CARBON RES. 1/4W J 100k Ω or	RCX4JATZ0104
		CARBON RES. 1/6W J 100k Ω	RCX6JATZ0104
R1037		CHIP RES.(1608) 1/10W J 10k Ω	RRXAJR5Z0103
R1038		CARBON RES. 1/4W J 100k Ω or	RCX4JATZ0104
		CARBON RES. 1/6W J 100k Ω	RCX6JATZ0104
R1039		CARBON RES. 1/4W J 470k Ω or	RCX4JATZ0474
		CARBON RES. 1/6W J 470k Ω	RCX6JATZ0474
R1043		METAL OXIDE FILM RES. 1W J 2.7 Ω or	RN01JZLZ02R7
		METAL OXIDE FILM RES. 1W J 2.7 Ω	RN01JZQZ02R7
R1095		CHIP RES.(1608) 1/10W 0 Ω	RRXAZR5Z0000
MISCELLANEOUS			
AC1001 ⚠		AC CORD A0A0280-007 or	WAC0172LTE04
⚠		AC CORD PB8K9F9110A-057	WAC0172LW008
F1001⚠		FUSE 1A/250V or	PAGG20CAG102
⚠		FUSE SIC 1A 250V UC/T	PAGG20CW3102
FH1001		FUSE HOLDER MSF-015	XH01Z00LY001
FH1002		FUSE HOLDER MSF-015	XH01Z00LY001
T001⚠		SWITCHING TRANSFOMER CSA-SW0230C	LTT00CPSA140
W001		PARALLEL WIRE, 8P AWG26#2651/P2.0/65	WX1H9400-001
W002		PARALLEL WIRE, 7P AWG26#2651/P2.0/50	WX1H9400-002

JUNCTION CBA

Ref. No.	Mark	Description	Part No.
		JUNCTION CBA Consists of the following	---------
CONNECTOR			
CN1005		CONNECTOR, 15P TUC-P15X-B1	JCTUS15TG001

DECK PARTS LIST

Comparison Chart of Models and Marks

Model	Mark
DVC860D	A
EWD2203	B

Ref.No	Mark	Description	Part No.
B2	A	CYLINDER ASSEMBLY MK12 NTSC 4HD HIFI or	N1668CYL
	A	CYLINDER ASSEMBLY(V) MK12 NTSC 4HD HIFI	N1669CYL
B2	B	CYLINDER ASSEMBLY MK12 NTSC 4HD	N1648CYL
B3		LOADING MOTOR ASSEMBLY MK12	0VSA13665
B8		PULLEY ASSEMBLY MK12	0VSA13500
B9		MOVING GUIDE S PREPARATION MK12	0VSA13560
B10		MOVING GUIDE T PREPARATION MK12	0VSA13562
B11		LOADING ARM(TU) ASSEMBLY MK12	0VSA13300
B12		LOADING ARM(SP) ASSEMBLY MK12	0VSA13299
B31		AC HEAD ASSEMBLY MK12	0VSA13275
B35		TAPE GUIDE ARM ASSEMBLY MK12	0VSA13277
B37		CAPSTAN MOTOR 288/VCCM012	N9670CML
B52		CAP BELT MK10	0VM411138
B73		FE HEAD ASSEMBLY MK11 or	N9742FEL
		FE HEAD ASSEMBLY MK11 or	N9743FEL
		FE HEAD(MK11) MH-131SF11 or	DHVEC01Z0005
		FE HEAD(MK11) VTR-1X2ERS11-148 or	DHVEC01TE004
		FE HEAD(MK12) VTR-1X2ERS11-155 or	DHVEC01TE005
		FE HEAD(MK12) HVFHP0047A	DHVEC01AL007
B74		PRISM MK10	0VM202870
B121		WORM MK12	0VM414091
B126		PULLEY MK12	0VM414330
B133		IDLER GEAR MK12	0VM305738
B134		IDLER ARM MK12	0VM305739
B148		TG CAP MK11	0VM412972
B300		C DRIVE LEVER(TU) MK12	0VM203773
B303		F DOOR OPENER MK12	0VM203751
B313		C DRIVE SPRING MK12	0VM414145
B347		GUIDE HOLDER A MK10	0VM304920
B354		SLIDER(TU) MK12	0VM101172
B355		SLIDER(SP) MK12	0VM101182
B359		CLEANER LEVER MK10	0VM304413
B360		CLEANER ROLLER MK9	0VM410032C
B361		CL POST MK10	0VM411114
B410		PINCH ARM ASSEMBLY(1) MK12 or	0VSA13285
		PINCH ARM ASSEMBLY(3) MK12 or	0VSA13288
		PINCH ARM(A) ASSEMBLY(4) MK12	0VSA13572
B411		PINCH SPRING MK12	0VM414644
B414		M BRAKE(SP) ASSEMBLY MK12	0VSA13282
B416		M BRAKE(TU) ASSEMBLY MK12	0VSA13283
B417		TENSION SPG(3002654) MK12	0VM414221E
B425		LOCK LEVER SPRING MK10	0VM411110
B426		KICK PULLEY MK10	0VM411095
B482		CASSETTE PLATE MK12	0VM203749
B483		LOCK LEVER MK12	0VM414095
B487		BAND BRAKE(SP) MK12	0VM305723
B488		MODE LEVER MK12	0VM101173
B491		CAM GEAR(A) MK12	0VM101174
B492		MODE GEAR MK12	0VM203769
B494		C DOOR OPENER MK12	0VM305719
B499		T LEVER HOLDER MK12	0VM305729
B501		WORM HOLDER MK12	0VM203767
B502		CAM GEAR(B) MK12	0VM305721
B507		REEL WASHER MK9 5*2.1*0.5	0VM410058
B508		S BRAKE SPRING MK10	0VM411121
B513		CAM WASHER MK12	0VM414741
B514		SCREW RACK MK10	0VM411535
B516		REEL WASHER MK9 5*2.1*0.5	0VM410058
B520		TU BRAKE SPRING MK12	0VM414285
B521		REV BRAKE SPRING MK12	0VM414222
B522		TG POST ASSEMBLY MK11	0VSA12080
B525		LDG BELT MK11	0VM412804
B529		CLEANER ASSEMBLY MK10	0VSA11161
B553		REV SPRING MK11	0VM412555
B555		RACK ASSEMBLY MK12	0VSA13289
B557		MOTOR PULLEY U5	0VM403205A
B558		LOADING MOTOR M31E-1 R14 7352	MMDZB12MM005
B559		CLUTCH ASSEMBLY MK12	0VSA13284
B560		KICK SPRING MK10	0VM411475A
B562		C DRIVE LEVER(SP) MK12	0VM203772
B563		SLIDER SHAFT MK12	0VM305762
B564		M GEAR MK12	0VM305735
B565		SENSOR GEAR MK12	0VM305736
B567		PINCH ARM(B) MK12	0VM305718
B568		BT ARM MK12	0VM305728
B570		CAM RACK SPRING(HI) MK11	0VM412923
B571		P.S.W CUT 1.6X4.0X0.5T	0VM408485A
B573		REEL(SP)(D2) MK12	0VM203755
B574		REEL(TU)(D2) MK12	0VM203756
B587		TENSION LEVER ASSEMBLY MK12	0VSA13279
B589		TENSION LEVER MK12	0VM305727
B590		BRAKE ARM(TU) MK12	0VM203752
B591		BAND BRAKE(TU) MK12	0VM305724C
B592		TG POST MK11	0VM412550
B593		CAM HOLDER(F) ASSEMBLY MK12	0VSA13390
B594		M BRAKE S MK12	0VM203753
L1051		SCREW, B-TIGHT M2.6X6 PAN HEAD+	GPMB9060
L1053		SCREW, S-TIGHT M2.6X8 WASHER HEAD+	GCMS9080
L1151		SCREW, SEMS M2.6X4 PAN HEAD+	CPM39040
L1191		SCREW, S-TIGHT M2.6X8 WASHER HEAD+	GCMS9080
L1321		SCREW, S-TIGHT M3X6 BIND HEAD+	GBMS3060
L1406		AC HEAD SCREW MK9	0VM410964
L1450		SCREW, SEMS M2.6X5 PAN HEAD+	CPM39050
L1466		SCREW, S-TIGHT M2.6X6 BIND HEAD+	GBMS9060
L1467		SCREW, S-TIGHT M2.6X5 WASHER HEAD+	GCMS9050

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